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SAMUEL L. ABBOT, M.D., AND JAMES C. WHITE, M.D.

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CASES ILLUSTRATING CONSERVATIVE MILITARY SURGERY.

By Francis H. Brown, M.D., Cambridge.

[Communicated for the Boston Medical and Surgical Journal.]

R. Martin, New York 30th. Wounded at Bull Run, August 30th, 1862. Ball entered outer and dorsal aspect of right arm, three inches below olecranon; the ball there split—one portion passing up, through the outer condyle of the humerus and lower part of the shaft of the bone, and thence out on the outer and posterior aspect of the arm, three inches below the elbow; the second portion passed through the radius and ulna, at a right angle to the axes of the bones, and lodged. This portion was removed by incision at a subsequent period. In addition, the humerus was fractured transversely just above the exit wound of the first portion of the ball, either by a fall or by concussion. In this case there was fracture of the humerus; comminution of the lower end of the same bone; injury to the joint; comminuted fracture of radius and ulna; and two ball-tracks of, perhaps, six and two inches respectively. We can scarcely wonder at the decision of the surgeon on the field to remove the limb, which, indeed, he was only prevented doing by the exhaustion of his chloroform.

Two days after receipt of the wound, the patient was received into hospital. The arm was found very much swollen and inflamed, partly due, undoubtedly, to his transportation and a tight bandage, but the vessels and nerves were uninjured, and it was decided to save the arm, if possible. The limb was put up firmly in felt splints, and antiphlogistic remedies were used locally and generally. For some days great constitutional irritation existed; the arm remained highly inflamed, swollen and painful, but at no time took on an unhealthy condition. The fractures united well. At the earliest possible day flexion and extension and pronation and supination were induced. When last heard from (three and a half months after the injury), he had entirely recovered, the only trouble being that in extending the arm it lacked an inch or two of being straight.

Longmore relates a very similar case in the attack on the Redan, in which the patient recovered with a useful limb (p. 107), and several cases of equal or more serious injuries, followed by recovery.

E. A. Barrell, N. H. 6th. Wounded before Richmond; admitted to hospital September 3d, 1862. Ball entered on inner aspect of right leg, four inches above malleolus; passed through tibia and out just over edge of fibula, five inches above outer malleolus. The tibia was fractured and thoroughly comminuted at point of wound; the fibula uninjured. This patient also just escaped amputation on the field. On entrance, the leg was much swollen and had a very angry look about the seat of fracture. Several pieces of bone were removed. The limb was put up in a fracture-box and carefully dressed from day to day. On the 1st of October there was good union in the tibia, one wound was closed and the other doing well. He was afterwards discharged from the hospital with a good limb.

Daniel C. Harvey, Mass. 19th. Wounded before Richmond June 30th, 1862. Ball entered posterior surface of right arm, about over centre of ulna, passed through this bone and out by two wounds on anterior and inner surfaces. The ulna was much shattered, up and down, and the wounds were all very large and lacerated, one of the wounds of exit being about three inches long. On the eleventh day after the wound, four inches of the continuity of the bone were removed, leaving the ends of the bone sound and smooth. The wounds healed well by granulation. He was discharged from service Oct. 1st; at this time he was able to use his arm for purposes requiring considerable power; the radius, on the principle of compensation, had perceptibly enlarged; pronation and supination were successfully performed.*

This patient came under observation recently (December) for the purpose of having a small piece of dead bone removed. For some months he has been at work, receiving full wages, at the rope-walk in the Charlestown Navy Yard. He has very good use of his arm. The radius has considerably enlarged; pronation and supination are perfect. He still has very imperfect command over the ring and little fingers, but otherwise uses his hand and arm perfectly.

LIGATURE OF THE SUBCLAVIAN ARTERY.

[Performed by Dr. Armsby, of Albany, and communicated for the Boston Medical and Surgical Journal by Marvin R. Peck, M.D., of Glens Falls, N. Y.]

Mr. John Ferguson, of Glens Falls, Warren Co., N. Y., had his right arm shattered by the accidental discharge of a cannon on the 7th day of July, 1863. He was 28 years of age, of sound health, and of large, robust frame. Gangrene commenced on the second day, and on the third I amputated near the shoulder, assisted by Drs. Holden, Ferguson, Sternberg and Littlefield. The stump healed kindly, and on the twelfth day after the amputation he was able to go out, and soon after resumed his usual active business pursuits. His health remained good until September, when he began to have pain and swelling of the stump, which continued until the 10th day of November, when I detected the pulsation of an aneurismal tumor. It increased rapidly, elevating the bones of the shoulders, the pectoral muscles, and filling the axilla. The skin soon after gave way, and he lost, by a sudden and rapid hæmorrhage, between two and three quarts of blood. He fainted, and became nearly pulseless; the opening was closed by compresses and adhesive plaster. The only chance now of saving his life was by ligature of the subclavian artery above the clavicle, and Dr. James H. Armsby, of the Albany Medical College, was selected to perform the operation.

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* An analogous case is mentioned by Staff Surgeon Williamson, of the English army in India, in which he removed the entire ulna, two inches of the humerus and the head and neck of the radius; and four months after the operation the man could "bend his forearm, lift a twenty-eight pound weight, pronate and supinate the hand and use his fingers well."—Longmore, p. 106.

The operation was performed on the 19th of November, 1863, assisted by Drs. Ferguson, Sternberg and myself, of Glens Falls, Dr. Little, of Fort Edward, and Mr. Armsby, of Albany. The patient was placed on his back, with his face turned to the left. The first incision was about half an inch above and parallel with the superior border of the clavicle, extending from the sterno-mastoid to the trapezius muscle, and exposing the superficial cervical fascia and the platysma myoides. The second incision was vertical, along the posterior border of the sterno-mastoid, intersecting the first at the margin of this muscle. In elevating the superficial fascia and the platysma myoides, it became necessary to apply a ligature to the external jugular vein, and divide it, as it could not be sufficiently retracted without danger of laceration. Three branches of the supra-scapular and deep cervical arteries bled profusely, and required ligatures. The clavicular attachment of the sterno-mastoid was unusually broad, and one half of it had to be divided to reach the scalenus-anticus, at its attachment to the first rib. The deep cervical artery was held upward; the supra-scapular artery and the subclavian vein carefully depressed; and the great subclavian artery fully exposed as it emerged from between the scaleni muscles. In separating the artery from the great veins, which covered and enclosed it, a slight gurgling sound occurred, as if air was entering the circulation. This was a moment of intense anxiety, as such an accident might have been instantly fatal. A bit of sponge was pressed against the part, and as no constitutional disturbance followed, the operation proceeded. The artery was found in a healthy state, and the ligature was cast around it by the aneurismal needle of Mott. The situation of the artery was unusually deep, from the elevated position of the shoulder, by the tumor, but every person present had a distinct view of it before the ligature was tied.

The chief difficulties and dangers of the operation consisted in the following circumstances:—The great size of the tumor, thrusting upward the bones of the shoulder; the distension of the surrounding parts; the great size of the veins, which covered and enveloped the artery; the large nerves of the axillary plexus, liable to be included in the ligature; and the danger of the introduction of air into the circulation. The pulsation in the tumor ceased as soon as the ligature was drawn, and the patient improved rapidly under the use of tonics. The sac gradually diminished, until the nineteenth day after the operation, when it became more painful, and the skin, or a portion of it, gave indications of sloughing. Dr. Armsby was again sent for, who opened the sac, and removed nearly a quart of coagulated blood and fibrinous matter.

The case has progressed favorably; the ligature came away on the twenty-ninth day, and the recovery has been rapid and complete, so far as the operation is concerned. There is a slight discharge of watery matter from the sac, which is gradually diminishing.

January 22d, 1864.

TREATMENT OF DEFORMITIES.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—Although during the last seventeen months employed in military service, where subjects coming properly under the head of orthopedic surgery, in the most extensive signification of the word, must be of course rare instances, and those only occurring in adults, who seldom remain long enough under the treatment of a military surgeon, I have not entirely forgotten my private practice, to which I shall be happy to return at an early day.

In perusing an article in the last number of your Journal, reprinted from the *Chicago Medical Examiner*, on "Improved Methods of Treatment in Deformities," I am forcibly reminded of many of the orthopedic institutions which in my time have flourished in Germany, among which are several that are mentioned in that article. Time and space do not allow me to enter into a very explicit discussion of a subject of so much importance in surgery, but I cannot forbear to make a few remarks, or rather state a few conclusions to which I have been led while engaged in the study of my profession in several of the most prominent hospitals of the Continent, and during my own practice since; especially as regarding the treatment of deformities of the spinal column.

I take the ground that such deformities, although they may neither be the result of, nor much dependent on muscular action or inaction, are most rationally treated by any appliances or stimulants, acting directly towards encouraging the muscular development of these and the neighboring parts, rather than by machinery, more or less complicated, applied for the mere purpose of extension, counter-extension and lateral action. Extension by a stretch-bed or other appliances may be very proper in some cases, but I doubt if many of them can be properly classed with orthopedic deformities. After such extensions have been carried as far (be it forcible or gradual) as may seem practicable, what would or must be the result, if no proper stimulants or nourishment are furnished to the muscles partaking in or upholding such a forced strain on the osseous and ligamentous structure, even disregarding the very prominent part the nervous system takes necessarily in the cause? To merely stretch muscles and ligaments to their utmost power is certainly not calculated to increase their strength, elasticity and vitality; but on the contrary, the additional effort, forced from them by mechanical means, would in most cases prove an additional source of weakness.

At the present standpoint of orthopedic surgery in this and other countries, there are certainly many and good appliances to choose from for adaptation to different cases of deformities, but in my opinion and by my actual experience in not a few cases (amongst which I would mention some acquired after the memorable Pemberton accident, at Lawrence, Mass., and of course more or less the result of traumatic injuries), I would take the ground decidedly, that the indication in the treatment of most, if not all such cases is, proper nourishment to the general system, direct nourishment to the muscles involved in the case, stimulation to the nervous system, and afterwards, and only then, a judicious selection of mechanical appliances, still in combination with the former, followed by properly conducted exercises in gymnastics. The first indication, of course, suggests proper nourishing diet, good healthy location, and as much exercise in the open air as can be obtained. As direct stimulants to the muscular and nervous system, liniments, rubefacients, &c., are in most cases called for, but one of the most beneficial remedial agents in my hands has been cold water, applied as a douche, or by sponging and dry rubbing afterwards. I have also employed, in combination with this treatment, electricity with good success, and in a few cases (including some complicated with partial paralysis), where all means seemed to fail to give tone and restore proper vitality, I have had very beneficial results from animal warmth, applied in the old-fashioned mode, still much in use in Germany. I would as soon endeavor to treat a case of fracture by *first* putting the limb in splints, and *afterwards* making reduction, as to make use of a stretch-bed, pulleys, &c., at the commencement of the treatment of a case coming properly under the head of orthopedic deformity.

Lovell Gen. Hospital, Portsmouth
Grove, R.I., Jan. 25th, 1864.

E. SEYFFARTH,
A. A. Surgeon, U.S.A.

CASE OF POLYPUS OF THE UTERUS.

[Communicated for the Boston Medical and Surgical Journal.]

The following case of fibrous polypus of the uterus, which has recently occurred in my practice, is worthy of notice from the unusual termination of the case. It shows the effort nature often makes to restore the human system, and to repair the injuries done it.

I was called suddenly, not long since, to a single lady of about 32 years of age. Upon inquiry what her disease was, she replied, that she had a prolapsus of the womb, which she had called upon me to replace. On examination of the patient, I discovered a large fibrous polypus of the uterus, expelled from the vagina, of nearly three pounds weight. I immediately called for a ligature, and placed it as high up as possible on the pedicle, which appeared to be a large fold of the lining membrane of the uterus. Having strangulated the pedicle, I let the tumor remain for three days, during which time it shrunk much; I then removed it with a probe-pointed bistoury. It weighed two pounds. The pedicle came away in a day or two, and the patient found herself much relieved.

Inquiring into the history of the case, as the person was a stranger to me, I learned that she had been suffering ten or twelve years from severe menorrhagia. The face was pale and anæmic, her health and strength broken down, and she was much emaciated, from the excessive loss of blood she had been sustaining for many years. She had been treated by different medical gentlemen in the city, with iron, styptics and astringents. A vaginal examination had never been made in order to ascertain the source of the hæmorrhage. She at last applied to a mesmeric physician, who, after a *thorough examination*, told her that she had no disease but debility, and her only remedies were rest and tonics. The lady and her physician now have some hope that, although still confined to her bed, she will ultimately recover.

E. Woodward.

Quincy, Mass.

Mortality of New York City in 1863.—The increase of deaths, as compared with 1862, is 3,952. The increase of mortality is regarded by the City Inspector as less than might be expected, when considered in relation to the actual population of New York in 1863. To the influx of strangers, which has been unprecedented, is attributed a very large number of deaths. A large number of soldiers, who have been discharged from the army as invalids, and incapacitated for further service in the field, have died in the city. Other causes of increase were the crowding of the public parks by the soldiers, the large emigration to the port during the year of 150,000, the filthy condition of the public streets, and the injurious effects on the public health of the riots last summer.

STATISTICAL ANALYSIS OF CASES OF CHOREA.

By Thomas B. Peacock, M.D., F.R.C.P., Physician to St. Thomas's Hospital.

The cases of which the following paper contains the statistical analysis, were treated by myself within the last few years, and, with the exception of three or four seen in private practice, all but one occurred at St. Thomas's Hospital.

Distribution of Cases as to Age and Sex.

Ages.	Total.	Males.	Females.
5 years	1	1	0
5 to 10 "	13	6	7
10 to 20 "	14	4	10
20 to 30 "	1	0	1
30 to 40 "	0	0	0
40 to 50 "	1	0	1
50 "	1	0	1
	31	11	20
Mean age	14·6	10·7	16·8

Predisposing Causes.

Occurred during rheumatic fever, with cardiac complication	1
Supervened a fortnight after recovery from what was regarded as diaphragmatic pleurisy, but which may have been some cardiac affection, though unconnected with any obvious physical signs	1
Supervened six months after attack of rheumatic fever, not obviously attended by any cardiac complication	1
Supervened shortly after an attack of rheumatic fever, and attended by a systolic murmur heard at the base	1
Stated to have been preceded by pains in the shoulder and thigh, but so slight as not to receive medical attention	1
Accompanied by a systolic murmur at the base, but no statement as to previous attack of rheumatic fever	1
Supervened shortly after an attack of erysipelas of the face	1
Followed, after an interval of a year and a half, an illness said to have been inflammation of the kidneys	1
Out of health three months before, but not laboring under any definite illness	1
Connected with retention of the catamenia	1
Connected with irregularity and defect of catamenia	1
In the sixth month of pregnancy, in a person who had had chorea in early life	1
No predisposing cause ascertained	19
	31

Connection of Cases with Rheumatism and Cardiac Affections.

Never had any form of rheumatism	9
Stated to have the heart's sounds quite healthy	5
" " " loud and flat	3
No report as to rheumatism and state of heart, but in all of which it may be inferred there was no cardiac disease	14
	31

Exciting Causes.

No exciting cause named, but in all of which it may be inferred that inquiries were made, and either resulted in negative information or in a denial of any obvious cause	8
Expressly stated that no exciting cause could be ascertained	10
Present or first attack ascribed to alarm	9
Referred to sympathy from seeing another person affected with chorea	1
To chagrin at having had money stolen	1
To joy at seeing her father return, who was supposed to have been lost at sea	1
Without obvious exciting cause, but greatly aggravated by a slight fall	1
	31

Proportion of Previous and Subsequent Attacks.

There had been no previous attack in	22
One or more previous attacks in	9
	31

Duration of the Attack for which admitted before the commencement of the Treatment.

2 days	1
7 days	3
10 days	1
2 weeks	5
3 weeks	1
1 month	6
6 weeks	1
2 months	1
9 weeks	1
10 weeks	1
3 months	2
4 months	1
	24
Not precisely ascertained	7
	31

Period at which the Previous Attacks had occurred in cases where there were two or more.

In early life, the patient being 22 years of age	1
Five years before, the patient being 19 years of age . . .	1
Two years before	1
One year and a half before (the patient having had three attacks during that period)	1
One year before (the patient having had five attacks in that period)	1
One year before (the patient having had only one attack) .	1
Three months before (but two previous attacks at 13 and 15 years of age, the patient being 17)	1
Very short time previously (subsequently a third slight attack)	1
Five previous attacks, but period not named	1
	9

Result.

Cured, 25; relieved, 2; died, 2; total, 31.

Residence in Hospital.

Duration of residence in 27 cases (26 cured and 1 relieved).—Mean period 52·7 days, and extremes 15 and 153 days; or, exclusive of the case only relieved, 48·7 days, and extremes, 15 and 134 days.

2 to 3 weeks	4	
3 to 4 "	3	
4 to 5 "	1	
5 to 6 "	4	
6 to 7 "	5	
7 to 8 "	1	
8 to 9 "	3	
9 to 10 "	1	
11 to 12 "	2	
17 to 18 "	1	
19 to 20 "	1	
21 to 22 "	1	relieved.
	27	

In two cases the date of discharge is not reported.

Duration of Residence as to whether first or subsequent Attacks.

Duration of treatment in 19 out of 22 cases of first attack, 52·5 days, and extreme periods 15 and 153 days; or, deducting the case in which relief only was obtained, 46·9, and extremes, 15 and 134 days.

Duration in 8 out of 9 cases of relapse or subsequent attack, mean 52·8, extremes 21 and 122.

Duration of Residence as to Age.

In 17 cases (including three of relapses or subsequent attacks, from 5 to 14 years of age inclusive), mean age 10·1 years, and mean period of treatment 48·1 days, extremes 15 and 134.

In 8 cases (including 3 of relapses or subsequent attacks), from 15 to 22 years of age inclusive, the period of treatment was 49.8 days, mean age 19·2, extremes 20 and 68.

In 2 cases, 48 and 57 years of age, the first having shortly before had a previous attack and again relapsed after this; in the other, in which the attack was a first one, and was never entirely cured, rather lapsing into paralysis agitans, the duration of the treatment was 57 and 153 days.

Treatment.

The treatment consisted in the employment of aperients, with the view of relieving any disorder of the digestive organs which may have existed, and the repetition of such as often as required throughout the continuance of the affection; the exhibition of nervine tonics, anodynes, and occasionally counter-irritants, to remove the spasmodic action; and at a later period, the use of the tepid or cold shower- or sponge-bath, with a nutritious diet and frequently wine or malt liquor.

The nervine tonics employed were sulphate of zinc, given in doses at first of one or two grains, in infusion of valerian, and gradually increased by one or two grains at a time, generally twice a week, and repeated three times daily; the remedy being suspended if sickness was produced; or when the symptoms subsided. The doses required for the cure in cases where zinc only was employed were four, six, eight, nine, eighteen, and twenty grains.

Iron was chiefly given in the form of the saccharine carbonate, in doses of five, ten, fifteen, twenty and thirty grains, three times daily; occasionally the sesquioxide was employed, and rarely the sulphate of quinine and iron, with an excess of sulphuric acid; or the citrate of quinine and iron.

Arsenic was given, in the form of the liquor potassæ arsenitis, in doses gradually increased from three or four to eight minims, three times daily.

The anodynes employed were morphia or hyoscyamus, exhibited at bedtime or more frequently during the day.

Blisters were occasionally applied either at the back of the neck or down the spine.

Tepid or cold sponging and the shower-bath were also frequently had recourse to.

The results of the treatment by these different remedies were as follows:—

The affection was cured by the employment of zinc alone in 7 cases, including three cases of relapse or subsequent attacks.

The mean age of the patients so treated was 12·1 years, and the extreme ages 8 and 22.

The period of time occupied in the cure averaged 35·5 days, and ranged from 21 to 63 days.

The cure was effected by iron alone in 6 cases, 1 being a case of relapse or subsequent attack.

The mean age of the patients was 10·4 years, and the extreme ages 10 and 13.

The period of treatment (the date of discharge in one case not being reported) was 28·6 days, and the extreme periods 20 and 46 days.

Zinc failed, but iron effected the cure in 6 cases, the mean age of the patients being 13.3, and the extremes of age 5 and 19.

The average period of treatment was 53·6 days, and the extreme periods 38 and 84 days.

Iron failed and zinc proved successful in 2 cases, the ages of the patients being 13 and 19, and the periods of treatment 122 and 68 days; both were cases of relapse or subsequent seizure.

Zinc and iron both failed, and the cure was effected by arsenic, in 1 case; the age of the patient was 9, and the duration of treatment was 78 days.

Zinc and arsenic failed in 1 case; but the patient was cured by iron and morphia, the latter exhibited first every night, in doses from one sixth to one third of a grain, and subsequently every night and morning. The patient was 14 years of age, and the duration of the treatment extended to 134 days.

Iron and arsenic were both used with little benefit in 1 case; but the patient recovered considerably under the use of zinc. The symptoms, however, never entirely subsided, but lapsed into an affection of the face and head, somewhat resembling paralysis agitans. The age of the patient was 57, and the duration of treatment 153 days.

Arsenic aggravated the symptoms, and zinc effected a cure in 1 case, the patient being 10 years old, and the treatment extended to 37 days.

Quinine and iron were successfully used in 2 slight cases of relapse, ages 48 and 12, and periods of treatment 57 and 41 days.

Of the two fatal cases, one terminated on the 6th day from admission, the 26th from commencement of treatment, and about the 34th from seizure; the other on the 15th from admission and 30th from seizure. Both the patients were 11 years of age; one was a boy, the other a girl. One took zinc, iron, arsenic, and morphia; had blisters, &c., applied: the treatment of the other case consisted in the employment of sesquioxide of iron and sulphate of zinc, opiates, and the application of blisters.

CONCLUSIONS.

The general conclusions deducible from this small number of cases correspond with those which have been arrived at by observations on much larger series:—

1st. The disease is shown to be much more common in females than in males, the proportion being 20 females to 11 males.

2d. It occurs at all ages, but much the most frequently in early life or youth and girlhood, or from 5 to 20 years of age. The cases at this period of life constituted 27 out of the 31 analyzed.

3d. The affection appears to be about equally frequent in young boys and in young girls, the number of cases at from 5 to 10 years of age being in boys 6, in girls 7.

4th. At a later period, or in youth and girlhood, or from 10 to 20 years of age, there is a great difference in the frequency of the disease in the two sexes, the cases in males being only 4, and in females 10. After this period also, the female sex seems to be very much more exposed to the disease than males; these facts pointing to catamenial irregularities, or other uterine disorders, as being influential in predisposing to the disease.

5th. By far the most frequent co-existence with chorea is, however, some form of rheumatic or cardiac affection. In 3 cases, the chorea supervened during or after attacks of rheumatic fever, and in a fourth the affection commenced with slight rheumatic symptoms. In one of the former cases there was obvious cardiac complication, and in a fifth there were signs of cardiac disease, but without any history of rheumatism. In 9 other cases it is stated that the patients and their friends had no knowledge of their ever having had rheumatism. It would thus appear that, in 14 cases, rheumatic or cardiac symptoms had existed in 5. It is, however, probable that this proportion is too large, as almost certainly full inquiry was made in reference to all the other cases, but failed to elicit any information. The co-existence or near connection of rheumatic and choreic attacks has, however, been so frequently observed as to have completely established the existence of some relation between the two affections, probably as coincident effects of a common cause.

In two other cases, not included in the report, in which the symptoms were mainly cardiac, there had been, or existed, symptoms of chorea. In one of these, a girl 9 years of age, the patient died of regurgitation through the mitral orifice from dilatation of the aperture without valvular disease, and the heart was very large—ten ounces and a half—double the natural size; the pericardium was adherent in places, and the endocardium thickened. The patient had had chorea three years before her death; and suffered first from cardiac symptoms after an attack of influenza about two years after. In the other case, a boy of 14, there were chorea, spasms, and paralysis of the left hand and arm, with rheumatic pains in different parts of the body, and cardiac symptoms, which had supervened three months before. The symptoms were apparently brought on by mental excitement. After death, the heart was found greatly enlarged; there was some effusion in the pericardium, and vegetations on the aortic and mitral valves. The patient had never been quite well since a severe attack of scarlet fever seven years before.

6th. The most frequent exciting causes of chorea are more or less violent mental impressions—fear, grief, excessive joy, &c. Of the 31 cases analyzed, 11 originated in some impression on the mind, and in the 12th, though the patient had had a slight fall, fear was probably the cause of the attack. It thus appears that mental causes operated in exciting the disease in 38·7 per cent. of the cases, and it is probable that the common origin of the disease in mental impressions explains in part its greater frequency in females. For such causes, however, to give rise to the symptoms, it is doubtless necessary that the individual should be unduly susceptible, for in several cases the assigned impressions were of too trifling a nature to have operated injuriously upon a healthy person. In 18 cases, also, or 58·06 per cent., it may be inferred that no exciting cause could be detected.

7th. The indications for treatment are to relieve gastro-intestinal irritation, quiet the nervous system, and improve the general power and the condition of the blood. The remedies which were employed for these purposes have already been mentioned. In the selection of the kind of nervine tonic to be exhibited in any given case, I have generally been guided by the existence or absence of evidences of chlorosis. When the patient is very anæmic, as indicated by the color of the skin and mucous membranes, the presence of continued venous murmur in the neck, &c., I have usually, after the employment of aperients, had recourse to chalybeate medicines; when, on the contrary, the patient was free from such symptoms, the zinc has generally been first employed:—the other remedies—arsenic, opium, &c.—only being had recourse to when the iron or zinc had failed. Under all forms of nervine tonic, the patients occasionally fail to derive benefit, but, as a general remark, zinc seems to prove more rapidly useful and to afford more prompt relief than iron. The remedies act with greater efficiency according to the rapidity with which the doses are increased and the full extent of the increase. Thus, I have generally increased the dose twice or three times in the week, adding in the case of the zinc at first one grain, and subsequently two or more each time. Though in the cases of chorea no patient took more than twenty grains of the sulphate of zinc for a dose, I have in other affections given thirty grains three times a day, and without producing sickness or any evidence of gastro-intestinal irritation.

When any given remedy has been fairly tried without marked amendment, or when the improvement at first noticed has not been continuous, it is better to substitute some other medicine, and the improvement which follows the employment of the new remedy is often very marked; and I have sometimes noticed this when a second or a third change has been made.

A good indication of the advantages of treatment may be derived from the condition of the pupils; generally in the active stage of chorea they are very large and nearly insensible to light, and as the patients recover, the pupils diminish in size and resume their proper motion. The shower-bath is often very beneficial, but in children it is apt to create alarm and to aggravate the symptoms. When this has been the case, I have preferred to employ ablution, and have used cold or tepid water, according to the state of the weather and the feelings of the patient.

8th. It does not appear that there is much difference in the facility of cure in cases of first attack, or of relapses or subsequent seizures. The age, also, does not influence the result, provided the patients be not in advanced life. In the only two cases at middle age and advanced age the attacks were, however, very prolonged, and in the elderly person the cure was only partial.

9th. Under any course of treatment chorea is very apt to relapse; and even after recovery is complete, attacks for a second or third time, or even oftener, frequently occur. It will be seen that in 9 out of the 31 cases, or 29·03 per cent., the patients had had previous attacks. I am disposed to believe, without, however, being able to bring conclusive proof on the point, that relapses occur less frequently in the cases which are treated by zinc than in those in which iron has been used; I have therefore not unfrequently given zinc to patients after the active symptoms have been relieved by the use of iron, and apparently with benefit in preventing relapse.

Fatal Case of Chorea.—John Adkins, aged 11, admitted into the Royal Free Hospital, August 2d, 1849. The symptoms were first observed about a month before; he was observed to twitch the hands and arms, and the spasms increased, so that he was brought to me as an out-patient on the 12th of July. He was directed to have a calomel and rhubarb purge, and to take ten grains of the sesquioxide of iron three times daily. When admitted into the hospital he had constant spasms of the muscles of the face, arms, and legs; he had difficulty in protruding his tongue, and could not retain it even for a very short time; he could not walk, and tossed himself about on the bed in every direction, and he had a peculiar vacant stare. He was directed to have a purgative, and take ten grains of sulphate of zinc three times daily. Anodynes were prescribed, but did not procure rest or sleep; and he was blistered at the back of the neck and down the spine. The convulsions became more constant and general, his intelligence declined, and he died comatose on the 8th—the sixth day from admission into the hospital, the twenty-sixth from the commencement of the treatment, and about five weeks from the first occurrence of the symptoms. On examination after death, the arachnoid membrane on the surface of the hemispheres was found opaque, and a copious effusion of serum existed beneath it. Much fluid was also effused in the ventricle, and existed at the base. The spinal cord was not examined. The cerebrum weighed 50 ounces, the cerebellum 5 ounces and 4 drachms, the pons varolii and medulla oblongata 1 ounce, making the whole encephalon 56 ounces and 4 drachms avoirdupois. The pericardium and heart were healthy, except that two of the folds of the aortic valves were somewhat united at the angle of attachment, and a loose band existed at the margin of one of them. This condition, however, was evidently a congenital defect. The heart weighed four ounces.—*British and Foreign Medico-Chirurgical Review.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, FEBRUARY 4, 1864.

The Boston Society of Natural History.—If there is anything not directly connected with itself upon which the medical profession of this community may especially pride itself, it is the progress which has been made in the study of natural science among us during the last thirty years, and the success which has marked the course of its foster child, the Boston Society of Natural History. This Society was founded in 1830 by a few gentlemen, mostly members of our profession, at which time almost nothing was known of the geology of our country or of its fauna and flora. Under its direction and by its own members, five of whom were physicians, those thorough surveys of the State were undertaken, which were published by the Commonwealth, and formed the first systematic reports upon the natural history of the United States. Since then the Society has published many volumes of its valuable Journal and its Proceedings, which are exchanged for the publications of nearly all the scientific associations of the world, and have been the means of extending its usefulness far and near.

The Society at first occupied a few rooms of an upper story in Tremont Street, but in 1845 it raised by subscription money enough to purchase the old medical college in Mason Street, where it was supposed the accommodations would be sufficient for all time; but the collections in the various departments increased so rapidly by contributions and donations from all parts of the world, that ten years were sufficient to more than fill it. In 1859, therefore, a petition was presented to the Legislature asking for a grant of land upon the new-made Back Bay territory for building purposes, and in 1860 another similar effort was made in connection with the Institute of Technology, but it was not until the following year that success rewarded the long-continued efforts of the Society. Even then the land was given only on condition that the character of the buildings erected should be sufficiently attractive to enhance the value of the neighboring sites enough to make good the loss thus incurred. The difficulty encountered in obtaining from the State this just reward for its long-continued services in so important a field of public education, may perhaps be explained by the extreme modesty with which the Society has always urged its claims upon the community, and its exclusive devotion to the cultivation of natural science in place of popular favor. So entirely characteristic has been this trait not only of the Society as such, but of its working members, that several of them, who are known among us only as eminent physicians or quiet professors, hold the very first rank in Europe as scientific men in the departments of natural history in which they have so unostentatiously labored.

Fortunately for the Society, however, it found in Dr. William J. Walker a patron whose generosity needed no stimulus of popular excitement, and received from him such liberal aid that, with the contributions of others and the money obtained by the sale of the estate in Mason Street, it was enabled to erect its present magnificent building on Berkeley Street. This building, which has been regarded by all who have examined it as the best of its kind in the country, is now completed, and will be open to the public as soon as the collections can be properly arranged. The Society has lately received large and very valuable additions to its museum and library, and has established a department of Ethnology, which it is designed to render as complete as possible by a perfect series of human crania, and any gentlemen possessing authentic specimens of this kind may be assured that no more useful disposition of them can be made than by sending them to the Society's collections.

A larger working fund being now necessary to carry on effectually the objects of the Society, Dr. Walker has again offered the sum of twenty thousand dollars, provided the same amount is obtained from other sources, and we sincerely trust that the committee appointed to raise this sum by subscription may be successful in their undertaking. Such unbounded liberality on the part of one of our profession certainly deserves to be widely known, and in this community as well as in Philadelphia it may now be said, that to members of our profession is due the principal credit both of developing the study of natural history among us and of furnishing the means of making such investigations of the greatest service to mankind.

RESOLUTIONS UPON THE DEATH OF DR. DALTON.—At the regular monthly meeting of the Suffolk District Medical Society, held on Saturday evening, January 30th, the President alluded to the loss the Society had met with in the death of Dr. Dalton since its last meeting, and stated that Dr. Reynolds, his most intimate friend, had been requested to present resolutions appropriate to the occasion. Dr. Reynolds then addressed the Society as follows:—

MR. PRESIDENT,—Since the last meeting of this Society, we have been called to mourn the death of Dr. John C. Dalton, one of its best and most beloved members. I have been requested, as one of his intimate friends, to notice by a few words the sad event. But he has been so favorably known by you all, during the past four or five years of his residence among us, that these words may be few.

I need not speak here of the eminent intellectual qualities which so well fitted him for the arduous duties to which he devoted his life; his ardent love for the medical profession, and his high conception of its power for doing good; his thirst for knowledge in all its departments, not for his own aggrandizement, but for the benefit of others. I need not tell the members of this Society of his zeal in making himself acquainted with every improvement in medical science during the whole period of his professional life, or of the skill with which he used them ; his willing labors, while reposing among us from its daily toils, in the promotion of its best interests ; his punctual presence at all our meetings, at our infirmaries and hospitals, and everywhere where he could acquire or communicate useful knowledge.

You need not to be reminded by me of his strong interest in all our public institutions, charitable, social or literary, and in everything that concerned the welfare of our city and the promotion of order and good morals. And, surely, I need not speak in this little gathering of medical friends, where he was so well known, of his ardent love of country, and his abounding labors in the Sanitary Commission and every other department which opened an opportunity for the free-will offerings of his patriotic heart. As a free, willing, public-spirited man, ready to make any sacrifice for the Nation's cause, he is known by all, respected and loved by all, and all feel his death to be a cause of public as well as professional sorrow.

It is more grateful to me on this occasion to speak of Dr. Dalton as a man and a friend ; to dwell for a few moments upon his moral qualities, which were, to me, quite as remarkable as the intellectual. I have known him intimately forty long years, and I now look in vain for any stain upon him that I would wipe away. He was in all the relations of life conscientious, faithful, just, generous and true ; warm-hearted and sincere ; remarkably free from envy, jealousy, evil-speaking and all uncharitableness. He seemed to me an unambitious man, except for the faithful performance of every duty ; very unselfish, honorable, as mindful always of the rights of others as his own. He was modest and humble, appreciating readily the merits of others, and seemingly unconscious of his own. He was loving, and so, beloved ; confiding, and therefore confided in. Feeling no enmity, he had no enemies. His standard for imitation was very high—the Law of God and the Sermon on the Mount ; his daily regret, the impossibility of rising up to its pure demands. And, with all this, there was a certain charm about his fine, intelligent face, his honest smile, his gentlemanly bearing, and the genial pressure of his hand, that seemed at a first interview to make every one his friend.

It was true goodness of character, the happy union of moral and intellectual graces—that made him so acceptable among us. Here we learn the secret of the loving tears that were shed at his departure from Lowell, the place of his long-life faithful toil, for a comparative season of repose among his relations and friends in his native city ; and the universal sorrow of that long procession of friends there, who gathered about his remains on their arrival, and followed them reverently and in sadness to his last resting place in their midst.

One word more, and I will close. Such, in my estimation, was Dr. John C. Dalton. He was beautiful in life and beautiful in death. His last hours were hours of sweet peace, and firm trust in the Highest Wisdom and Love. His last words were brave words of Christian counsel to his children and nearest friends. All who witnessed those hours and heard those words, must have recognized the broad foundation on which his character was moulded, and the Source, something, surely, higher than earth, of his true, noble life.

With these few, and I feel sure that you will all add, *true* words, I submit for your consideration the following resolutions :—

Resolved, That the members of this Society have heard with profound regret the announcement of the death of Dr. John C. Dalton, one of its most honored and beloved members.

That in Dr. Dalton's character the qualities which ensure professional eminence and usefulness were admirably united to those which win universal respect and love.

That through a long professional career he was distinguished not only by abilities of a high order, and the most thorough training in his art, but by the spirit of a high-minded and honorable Christian gentleman.

That in his death the medical profession has lost one of its best members, the poor a kind and tender friend, society a man greatly beloved, and our country a patriot who knew no sacrifice too costly to make in her defence.

That we offer our heartfelt sympathy to his bereaved family, with the hope that in this the hour of its great sorrow, they may be borne up by Heaven's best consolations, and soothed by the pleasant memories that will ever cluster about his noble life and beautiful death.

LOWELL, January 27th, 1864.

The following preamble and resolutions were presented by Dr. Elisha Huntington, and unanimously adopted by the Fellows of the Middlesex North District Medical Society at their regular quarterly meeting :—

Whereas, it has pleased Almighty God to remove from this world our friend and late fellow member of the Middlesex North District Medical Society, John Call Dalton, M.D., while humbly bowing to this dispensation of an All-wise Providence, it becomes us to give some public expressions to the feelings that an event so unexpected and so sad is well designed to excite—

Therefore resolved, 1st, That in the death of Dr. Dalton we mourn the loss of a remarkably intelligent and sagacious physician, a wise and judicious counsellor, a warm-hearted and genial friend, and a high-principled and Christian gentleman.

2d, That in our behalf and in behalf of this community where for so many years the deceased was known and loved, we desire to bear our testimony to his uniform kindness, to his unfailing charity; and to his active devotion to every good work.

3d, That in the zeal and devotion he has manifested in the present unhappy struggle for national unity ; in the dedication of his own sons to his beloved country ; in the sacrifice of time and money for the benefit of the suffering soldiers, he has proved himself a true man and an enlightened patriot.

4th, That Dr. John C. Green be requested to deliver before the Middlesex North District Medical Society an address upon the life and character of Dr. Dalton, at such time as may suit his convenience.

5th, That a copy of these resolutions, duly signed by the President and Secretary, be forwarded to the family of the late Dr. Dalton, and that the same be published in the Boston Medical and Surgical Journal and in the papers in this city.
GEO. B. WHITMORE, *Secretary*.

JONATHAN BROWN, *President*.

THE MALDEN MURDER.—We are much pleased to be able to exonerate a most worthy member of our profession from any suspicion of haste or want of care in this affair, which we noticed in our issue of Jan. 21st. Dr. Sullivan's conduct throughout, as will be seen, was in every way such as we should expect of a gentleman of his high character and professional standing. The facts are briefly these :—He paid a friendly visit to the parents of the deceased, whose family physician he had been for many years, upon the *evening* of the murder, having been absent from town all day on professional duty.

He asked permission to look at the body as a matter of curiosity, and found it in the hands of the undertaker. With some difficulty he obtained permission to look at the wounds, and introduced a short probe, which he chanced to have with him, into the wound on the forehead, to observe for his own satisfaction merely if it apparently was connected with the wound under the ear. He could not prevail upon the gentleman who had charge of the body to disturb its position sufficiently to enable him to make a thorough examination of both wounds, and did not care to press matters at that time, as he supposed an autopsy would be directed. It was unexpected to himself that he was afterwards called upon to give evidence at the inquest. The external appearance of the wounds was such, however, that he had no doubt the deceased met his death from a bullet wound, the wound behind the right ear being the wound of entrance, and the wound near the left temple the wound of exit. At the inquest he drew the attention of the coroner and jury to the conflicting opinions of Dr. Burpee and himself, and remarked that an autopsy would remove all doubts and give him great satisfaction, but they did not see fit to order one.

Messrs. Editors,—The Suffolk District Medical Society passed the following vote at its last meeting. It has been forwarded, in the form of a petition to Congress, to the care of Hon. Henry Wilson. Cannot similar petitions go up from the Committee of the American Medical Association and from the various medical societies of the country? The bill proposed by Mr. Wilson, especially as reported back by the committee, is an admirable one, meeting all the obvious wants of the case, and I cannot but hope that Congress would, if properly urged to do so by the profession of the country, agree to take the initiative by a joint resolution, or otherwise, towards engrafting upon the inter-belligerent code of all nations and for all future wars this benign and most appropriate law of the inviolability of the persons and property of surgeons and their assistants when engaged in their specific duty of caring for the wounded. Why cannot you commence the discussion of the subject in your Journal? Perhaps other journals will follow. Yours truly, Henry I. Bowditch.

February 1*st*, 1864.

The following is the petition referred to:—

Boston, January 30th, 1864.

To the Senate and House of Representatives in Congress assembled:

At a meeting of the Suffolk District Medical Society, held this day, the following resolution was passed, and the undersigned were directed to communicate it to your honorable body.

Resolved, That this Society hails with great pleasure the proposal of so admirable an ambulance bill as that which is now before Congress, through the agency of the Military Committee; and in addition thereto, would respectfully but earnestly urge that in connection with it a declaration be made by Congress, to the effect that hereafter in all wars belligerents should regard surgeons, and their assistants the men of an ambulance department, while actually engaged in their humane calling, as inviolable in their persons and property, and never, save under extraordinary circumstances, to be retained as prisoners of war.

D. H. Storer, *President*.
D. W. Cheever, *Secretary*.

ANTIDOTES FOR STRYCHNIA.—Professor R. Bellini, after conducting a long series of experiments on poisoning by strychnia and its salts, arrives at the opinion, that the best antidotes are tannic acid and tannin, chlorine, and the tinctures of iodine and bromine. Chlorine, he maintains, attacks the strychnia even when it is diffused through the system, for he found that in rabbits poisoned with the sulphate of the alkaloid, on being made to inhale chlorine gas in quantity, such as was not sufficient in itself to kill, the convulsions were retarded, and were milder when they occurred; death also was less rapid. The author further observed, that when strychnia was exhibited with pyrogallic acid, the convulsion was retarded for the space of half an hour, by comparison with other experiments in which the alkaloid was given by itself. Professor Bellini believes that this arrest in symptoms is not dependent on the acid acting chemically on the strychnia, but only through the astringent effects produced by the acid on the mucous membrane of the stomach, whereby the absorption of the poison is rendered difficult. The same author, dwelling on the frog-test for strychnia, asserts that this test is not to be trusted, inasmuch as other poisons produce the tetanic symptoms, although in a lesser degree. He adds, in speaking of the effects of the antidotes to which reference has been made, that he trusts his results will have a bearing not only on the treatment of strychnine tetanus, but on traumatic and idiopathic tetanus disease.—*British Medical Journal.*

WOMEN'S HOSPITAL, NEW YORK.—At the late annual meeting, Dr. Thomas Addis Emmett reported that 110 patients have been under treatment in the institution during the past year. Eighty-five surgical operations have been performed during the year, mostly of a severe character. The number of out-patients was 610, all of whom could have been better treated in the hospital, had there been room for them. The receipts during the year were $7,619.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 30th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	42	42	84
Ave. mortality of corresponding weeks for ten years, 1853—1863,	39.3	34.0	73.3
Average corrected to increased population - - - -	00	00	80.56
Death of persons above 90 - - - - - - -	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
12	2	11	10	1	0	2	2

DEATHS IN BOSTON for the week ending Saturday noon, Jan. 30th, 84. Males, 42—Females, 42.—Accident, 3—apoplexy, 1—congestion of the brain, 3—disease of the brain, 2—bronchitis, 6—consumption, 12—croup, 2—diarrhœa, 1—diphtheria, 2—dropsy, 3—dropsy of the brain, 4—exhaustion, 1—scarlet fever, 11—typhoid fever, 2—disease of the heart, 2—infantile disease, 3—congestion of the lungs, 3—inflammation of the lungs, 10—malformation, 1—marasmus, 2—paralysis, 1—premature birth, 1—puerperal disease, 2—purpura hæmorrhagica, 1—smallpox, 1—tumor, 1—unknown, 3.

Under 5 years of age, 38—between 5 and 20 years, 12—between 20 and 40 years, 15—between 40 and 60 years, 12—above 60 years, 7. Born in the United States, 59—Ireland, 22—other places, 3.

THE

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CASES OF OPIUM POISONING.

[Read before the Boston Society for Medical Observation, Jan. 18th, 1864, and communicated for the Boston Medical and Surgical Journal.]

By John G. Blake, M.D., Boston.

At 3 o'clock in the afternoon of June 20th, I was called in haste to see Mr. W. P., in a small court leading from Harrison Avenue, distant from my house about two minutes' walk. I found him lying on a bed, apparently asleep, and in a few moments received, in reply to inquiries, the following history.

His age was thirty years. One week previously he had come home from Fortress Monroe, on a short furlough, where he had been serving as hospital steward to one of our Massachusetts Regiments, and his leave of absence having expired, he was to have returned the evening of the day on which I was requested to see him. In consequence of some family trouble, he had several times declared his intention of taking poison or killing himself by some means. No notice was taken of these threats by his brothers and sisters or wife. At 1 o'clock he left the house, returned in five minutes, and went to his room. He did not appear at dinner, but his absence excited no comment in the family. At 2, his brother went to his room, but found it locked, and supposing him asleep did not wish to disturb him, and waited for about an hour, when, not hearing him moving, he became alarmed, forced open the door, and found him on the bed asleep. He sent immediately for a physician, and I saw him a few moments afterwards.

He was lying on his back, the head thrown over a pillow, and both arms extended. The face was pale, with a slight bluish tinge, cool, and moist with cold perspiration; the lips purplish, slightly parted, and partially covered with frothy mucus; breathing slow and loud, but hardly stertorous; pupils very much contracted; pulse 65 or 70, full and regular. The hands were cold and the nails quite blue. On a table by the bedside was an ounce vial, labelled "laudanum." I sent a messenger to the druggist from whom it had been purchased, asking the quantity and the time at which he sold it. The hour was

1 o'clock, and the quantity an ounce. The druggist stated that the man represented himself as an apothecary, well acquainted with the properties and dose of the preparation, and under these circumstances he had no hesitation in selling it to him. The tincture was the officinal U. S. Pharmacopœia preparation, strength about twenty-five drops equivalent to one grain of solid opium. He had evidently taken the whole of the contents of the vial. The odor of laudanum was perceptible in the breath.

I commenced treatment by shaking him pretty roughly for a few moments, with the effect of rousing him sufficiently to speak or mutter a few words and attempt to shake off my hands or push me away, and then relapsing again into his state of stupor. An emetic composed of ten grains of sulphate of zinc and one drachm of pulverized ipecac was given, mixed with a teacupful of warm water. Six or eight men, including two police officers, were summoned, and the room having been cleared of furniture and the bedstead, in the course of a few minutes he was walking around, supported on each side by one of the men. In about ten minutes he made one or two attempts to vomit, but only a little mucus was thrown up. Efforts to promote emesis by tickling the fauces with a feather not succeeding, a second dose of ipecac was given, mixed with a large quantity of warm water. This was followed by tolerably free vomiting, emptying the stomach completely. A strong infusion of coffee was now ordered to be prepared, and in the mean time the walking briskly around the room was continued without intermission, the men relieving each other as they became fatigued. The day was intensely hot, and with all the doors and windows open, and every fan in motion, our efforts to procure a draft of cool air were not attended with much success. The man weighed fully one hundred and seventy-five pounds, and with the thermometer at 85 in the shade, it was no boy's play to keep him in motion, unable as he was to assist himself. Ammonia was applied to the nostrils and small doses in brandy given internally. The coffee being now ready, it was given in teacupfuls frequently repeated, till he had taken a pint and a half in the course of an hour. There was as yet no improvement; if he was allowed to rest for a few moments he relapsed into unconsciousness, and we had to pull his hair, pinch and slap him, to rouse him the least. At 4½, P.M., I sent for my friend Dr. Damon, and Mr. Webber, a member of the medical class, and with their assistance we succeeded in finding two or three fresh men. We carried our patient out into the court, and kept him in motion in the open air. I had previously tried to get a galvanic battery, but was unable to obtain one. About six o'clock, after three hours pretty active treatment, he began to brighten up a little; could keep on his feet and walk without falling forward at every second or third step, and would at times try to disengage himself from the hands of my assistants. Encouraged by this we continued, but our assistants were nearly exhausted, and no new ones coming to replace them, it was determined to send him to the hospital. An open waggon and mattrass were soon ready. He was seated on it, and with Mr. Webber on one side and a policeman on the other, to prevent his returning to a state of stupor, he soon reached the hospital. I acquainted the medical superintendent with the history and the means used to restore him, stating that of the usual remedies employed electricity and belladonna were the only ones untried.

He immediately applied the poles of a battery, and by repeated shocks succeeded in rousing him, so that before I left the hospital he was walking about the grounds almost without assistance. Later in the evening, the stupor returning, one drachm of Thayer's fluid extract of belladonna was given, without producing any marked change in the pupil. It was repeated in the course of half an hour, with the effect of causing moderate dilatation. Stimulants were given in moderate quantity, and although he seemed to have passed the most serious part, towards morning he began to sink gradually, and at 10 o'clock on the following day died.

There was no autopsy.

Mary L. M., aged 20, a strong, healthy-looking girl, swallowed, in the evening of July 27th, six drachms of laudanum. I was called to see her at half past eight o'clock, an hour and a half after she had taken the poison. When I entered her room, she was sitting in a rocking chair by a window, her head leaning forward on her breast, hands clasped together resting on her lap, and apparently sleeping. She was breathing slowly and with some difficulty, almost snoring; the skin cold and moist; countenance dark and lips almost purple; pupils contracted and insensible to light; pulse 60, full and regular; hands and feet cold. General appearance that of a well-marked case of opium poisoning. Shaking and loud talking in her ear would rouse her partially, but almost immediately after she would sink into unconsciousness.

A bottle containing a few drops of tincture of opium, with the name of a Washington Street druggist on the label, was on the mantel-piece. Giving directions to the attendants to keep her moving around the room, I went to the druggist to ascertain the amount sold her and to procure remedies. On my return, I succeeded in making her swallow a strong dose of ipecac (ʒ i.) and sulphate of zinc (ten grains), and nearly half a pint of warm water. This was soon followed by free vomiting of liquid and frothy mucus, from which a faint odor of opium was perceptible. After the vomiting had ceased, a strong infusion of coffee was given in small quantities and frequently repeated. Ammonia was applied to the nostrils occasionally, friction to the extremities, and sinapisms over the stomach and chest. During the application of these she was necessarily allowed to rest, but prevented from relapsing into stupor by shaking, pulling her hair, &c. By two o'clock, the narcotic effects of the drug began to subside, and soon after three she could speak plainly, and walk with slight assistance.

I left at four, giving strict directions to the attendants not to allow her to go to sleep, and to call me if she became worse in any respect. I saw her again in four hours—at eight in the morning. She had recovered almost entirely from the narcotic effects of the drug, but complained of great prostration, severe headache and nausea. I prescribed brandy and carbonate of ammonia, and beef-tea, to be taken during the day. In the evening she was feverish, at least she described herself as feeling so, the skin was warm and perspiring, and the pulse 120; bowels had not been moved for two days. An enema was given, and repeated till it produced the desired effect, and a drachm of fluid extract of valerian prescribed. Next morning she was much better, had slept during the night, and felt comparatively well; told me why she had taken the laudanum, and the excuse she gave to the druggist (quite unnecessary, I believe, as it is sold without restriction by almost all). I continued to visit her for the two following days, but she did not require any particular treatment and was soon perfectly well.

The following case can hardly deserve the name of poisoning, the symptoms were so few and slight.

Mrs. M., aged 40, of intemperate habits, took, between two and three o'clock in the afternoon of the 18th of October last, nine drachms of laudanum in three doses of three drachms each, at intervals of ten minutes, the last dose at about half past two. Regretting what she had done, I was sent for, and saw her in three quarters of an hour. She told me that having had a quarrel with her husband she had become tired of life, and had purchased the laudanum by sending her little girl to three separate apothecary shops, and buying six cents worth in each to stop the "toothache," and giving me the names of the druggists. I asked if she had taken dinner; she said yes, at half past one o'clock, and was beginning to feel sleepy.

There was some contraction of the pupils and a little slowness and fulness of the pulse, but no well-marked symptoms. I gave her an active emetic of ipecac and sulphate of zinc, and made her assist its operation by putting her finger down her throat and drinking a quantity of warm water. In the course of ten minutes she had ejected her dinner, and with it the greater part of the laudanum. Her husband having arrived at this stage, I gave him directions to keep her awake for several hours, and to summon me if she became worse.

I saw her again in the evening; she felt sleepy and benumbed, had a dull, heavy look about the eyes; the pupils were moderately contracted, but sensitive to a certain extent to light. She had taken about a pint of coffee during the afternoon, but had not retained it. I ordered fifteen drops of aromatic spirits of ammonia every half hour till midnight; after that she might be allowed to sleep. Next day she was entirely recovered from its effects.

This woman had been under my care about a month before for delirium tremens, and had taken tolerably large doses of opium without their producing any narcotic effect. As it was impossible to ascertain the precise quantity of laudanum absorbed from the first dose till the emetic operated, but which must have been very considerable, I have since thought that she would have recovered from it even without treatment, as I believe it is a well-known fact that individuals accustomed to the use of alcohol are not affected to the same extent by opium and its preparations as others who are not in the habit of using alcoholic stimulants.

ESCAPE OF INTESTINES FROM A HERNIAL SAC.

[Read before the Suffolk District Medical Society, and communicated for the Boston Medical and Surgical Journal.]

By Robert White, M.D., Boston.

December 18th, I was called to visit Mrs. C., Belcher's Lane, aged 60. She complained of severe pain in the stomach, with inclination to vomit. I ordered her to drink some warm water, and prescribed one ounce of a solution of morphia, a teaspoonful to be given every fifteen minutes until relieved. After taking one dose of the morphia, she vomited about two quarts of a yellowish-colored fluid. The pain increasing, she attempted to get out of bed, and then, for the first time, felt something unusual hanging down on her thighs, which alarmed her so that she sent for me again. I immediately visited her, and on examination found about eight inches of the ileum protruding through an opening in a very large hernia in the linea alba, below the umbilicus. It was very much congested, very dark colored, and, I found, mortified; and the priest having arrived, I desired him to perform his office, as I had no hopes of her recovery. In the mean time I went for my pocket-case, and fortunately had a hernia bistoury. I returned, and as soon as possible made a thorough examination, and found that about four inches more of intestine had escaped through the opening since my first examination, about fifteen minutes before. It was of a natural color, the line of demarcation being well marked between this and the congested portion. I tried carefully to return it, but could not. Feculent matter was distinctly felt within the intestine, and I feared that too much manipulation might rupture it. I immediately enlarged the opening with the bistoury, making an incision upwards about three fourths of an inch in extent, through which the intestine was easily returned. After this, the pain immediately ceased. I then sewed up the wound, using five stitches, taking care not to include the peritoneum, which was distinctly seen lining the inner surface of the parietes, and applied long strips of adhesive plaster and a bandage. Afterwards I dressed it every second day with adhesive plaster. It healed up rapidly; in two weeks it had perfectly cicatrized, and in three weeks she resumed her usual household work. Her bowels were not moved for a week after the operation, and then her dejections were scybalous, which is their normal condition.

The history of the case, so far as I could ascertain, is the following. About eight years ago she had a large abscess immediately below the umbilicus, which burst, discharging a very large quantity of blood and pus. After some months it healed, leaving a large cicatrix in the linea alba, which now measures three inches in length. After this, the hernia formed, and grew to an immense size, so as to hang down on her thighs when she walked about or worked. The hernia had become sacculated; that is, a number of smaller herniæ projected from the large one. Probably one half of the intestinal canal is contained in the hernia. The former cavity of the peritoneum is so contracted as to be incapable of receiving back the contents of the hernial sac. In one of these sacculi, where the integuments had become very thin, the present rupture occurred.

About four years ago a small opening formed in the same sacculus, through which a piece of omentum protruded. By rest for two or three weeks she got well. The omentum rotted away, a piece of it remaining and plugging up the hole like a cork, as she described it. Afterwards the hole disappeared, and the integuments had become of a uniform appearance.

ON THE PREPARATION OF FLESH MEAT AS HUMAN FOOD.

Read before the Dublin Royal Society by E. D. Mapother, M.D., &c.

The importance of all subjects concerning public health and the economy of human food must be my excuse for troubling the meeting with some points in relation to the preparation of flesh meat. I have long regarded the present mode of slaughtering animals as most wasteful and injurious; for it removes all the blood, most of the lymph and chyle, and a considerable quantity of the muscle juice and of the serum which soaks the solid parts. Sheep and swine are killed by plunging a long knife from one side of the throat to the other, by which all the great vessels of the neck are divided; the heart, still beating for several minutes, most effectually pumps out all the fluids of the body. The butcher sometimes attempts to run the knife between two bones of the neck, and thus divide the spinal cord; but, as I have determined by examination afterwards, he nearly always fails in this object, and the creature struggles and suffers pain for several minutes till it dies. Sheep are not now knocked on the head, as the appearance of the carcase is thought to be spoiled by that part being crushed, bruised or stained. Oxen, however, having more power to resist their destroyer, are firmly tied to a stake, and are rendered insensible by being hit on the forehead two or three times by a pole axe; a long knife is then thrust from the neck obliquely into the chest, and the great vessels are divided as they issue from the heart; blood jets out forcibly for some minutes, and then its flow is further aided by a man standing on the chest, and thus compressing all the vessels. About sixty pounds of blood will flow from a full-sized ox, all of which is allowed to drain into the sewers leading from the slaughter-house, and becomes a nuisance in the neighborhood by the pestilential vapors it evolves in decomposing.

I had some years ago an opportunity of judging of the injurious effects of these effluvia, for there was a slaughter-house about twenty yards behind a house in Harcourt Street, in which I then resided. It has since been removed by the authorities. It may be calculated, from the data given in Morton's "Cyclopædia of Agriculture," that about 90,000 tons of blood are in this way wasted annually in England, although its value as manure has long been proved. As is well known, the Jewish nation strive to abstract the blood still more completely. The Rabbi slaughters the animal, which has been previously securely tied, by one great cut, with an extremely sharp knife, across the neck down to the bone. He previously sprinkles a little water upon the animal. The blood jets out for many feet, and the animal struggles and suffers acutely for several minutes. In examining the carcase afterwards, if the slightest adhesion is found between the lung and the chest, it is rejected. The reason of this is probably that the lung would then contain some blood, as it could not entirely collapse. In most cases animals are not fed for many hours before they are slaughtered; for experience had discovered what physiologists have lately explained, namely, that animals pour out nearly twice as much blood if fed. Calves are bled two or three times, with intervals of about twelve hours, before they are killed; and they are thereby rendered so weak that they often faint, or even die, at the second or third bleeding; when, at last, their throat is cut, scarcely any blood issues. The injury this cruel process inflicts on the flesh will be shortly alluded to. Pigs and poultry are still more barbarously treated; for, after the knife is used, they are allowed to run about.

I shall now endeavor to show the propriety of allowing the blood to remain in the animal, distributed throughout the flesh we use: and while I acknowledge that long-established custom seems to have sanctioned the present method of slaughtering, I must remark that many other popular fallacies, which are now seen by every one to be injurious, have only slowly yielded to improvements in scientific knowledge. As will be seen by the analyses of Playfair, blood and flesh are almost exactly identical in elementary composition:—

	Dry Ox Blood.	Dry Ox Flesh.
Carbon	54·35	54.12
Hydrogen	7·50	7·89
Nitrogen	15·76	15·67
Oxygen	22·39	22.32

and from this fact, Pereira, one of the most reliable writers on diet, allows that their nutritive value is equal. The amount of water each contains is also very similar, namely, 22 per cent. in blood, 20 in flesh. The more important constituents of blood are exhibited in this table:—

Water	779·20
Hemato-globulin . . .	141·10
Albumen	69.50
Fibrin	2·20
Fat	1·60
Salts	5.93
Iron	0·57
	1000·00

Blood, then, contains about 70 parts per 1000 of albumen, the model alimentary substance which is presented to us by nature in that typical food the egg, and which, although undeniably superior to the matter which constitutes meat, is wholly drained from it by bleeding. Hemato-globulin, the albuminoid which forms the red cells, exists in the large proportion of 140 per 1000, and this is convertible by the stomach into a substance undistinguishable from that obtained from flesh.

With regard to the other nitrogenized substance, fibrin, it may be objected that it is not susceptible of solution in the weak acid mixture which gastric juice presents; but it would certainly afterwards yield to the alkaline pancreatic juice, which has lately been shown to be concerned in the digestion of some albuminoids. Its small proportion, however, 2 per 1000, renders its consideration unimportant.

It is, however, in the saline matters that meat deprived of blood suffers the most serious loss. The salts of potash abound in flesh, whereas those of soda are almost entirely absent. In blood, on the contrary, there is a large proportion of chloride of sodium, or common salt, and of phosphate of soda—materials of extraordinary value as constituents of human food. This latter salt has been shown by Liebig to fulfil an office essential to the maintenance of life, and which no other salt is capable of performing, namely, the absorption and conveyance of carbonic acid to the lungs, where by exposure to the air it is discharged. That renowned philosopher exclaims:—

"This is again one of the numberless facts which fill with inexpressible admiration the soul of the observer of natural arrangements—namely, that an alkaline phosphate exhibits towards carbonic acid the same comportment as a neutral alkaline carbonate does. Contrary to all known laws, it appears to the chemist like a miracle that two acids—a gaseous one and a fixed one, one of the weakest and one of the strongest, which of all acids differ most in composition—can form with the alkalies found in the blood compounds of the same chemical character. Phosphate of soda has an alkaline taste, and reaction like the carbonate; and its solution in presence of free carbonic acid takes up as much of that acid as the carbonate of soda does, and, like it, only more easily, gives it off, by agitation with air, *in vacuo*, or by evaporation, without losing its power of again absorbing the carbonic acid."

Iron, too, that highly useful, or indeed apparently essential constituent of our body, is drained out with the blood; the sulphates, also, which doubtless have some useful, although as yet undetermined, function in the animal economy, exist exclusively in blood. With regard to the potash salts, although they exist in greater proportion in flesh than in blood, there can be little doubt that the last flowing portions of that fluid would rob the solids of a considerable amount. They are, however, much more completely abstracted in the salting of meat, the brine, which is thrown away, containing probably as much valuable material as the tough and scarcely soluble residue. That fearful disease, scurvy, depends on this withdrawal of soluble salts in the curing of meat, as was first demonstrated by Dr. Aldridge, and announced in this room.

Now, I have no doubt that the use of meat in which the blood was retained would prevent this disease; for my former pup ilDr. David Walker, the naturalist and surgeon to Sir Leopold M'Clintock's Arctic expedition, has informed me that underdone meat, and in which some of the blood remained, was the only sure preventive or restorative. While I am mentioning the injurious effects of the ordinary method of salting meat, I may state that the "Patent Journal" for the 6th of this month announces that provisional protection has been granted to a mode of "preserving from decay human bodies and bodies of other animals; also pickling, curing, and flavoring animal bodies." I am not aware of the nature of this process, but I have grounds for believing that the injection of strong saline solutions through the arteries of the animal would accomplish the object. I take no credit whatever for this surmise; for although familiar for many years with the preservation of anatomical subjects, by a method invented by that most able anatomist, Dr. Alcock, it never occurred to me till I had heard of the application for the patent alluded to, that the plan might be used in the case of animals which are cured as food. I can see, however, the extraordinary value of such a method, by which the curing of swine could be accomplished with great rapidity, at a mere nominal cost, and without any loss, by the removal of the soluble constituents of the animal, or by the decomposition of the deeper parts of the flesh, which now so often occurs. It would also more effectually destroy the cysticerci, or the animalcules which infest measly pork, and which are capable of developing tape-worm if introduced in a living state into man's body.

Kreatin, that invigorating principle of meat, and other flavoring matters, are also doubtless abstracted from the muscle-juice by the last flowing blood.

I do not know of any principle in the blood of animals which could prove injurious if introduced into the stomach of man; for such effete matters as urea are so completely thrown off by the eliminating organs of the animal, if healthy, that the most expert analyst can scarcely discover them in that fluid. Blood being the source from which all the pabulum of the tissues is supplied, it would seem right that that of other animals should replenish that of man; for the more closely an aliment resembles the substance of the animal which it is destined to feed, the more perfect must it be considered, as the process of digestion and assimilation are then most rapid and simple. However, I would not advocate its use in the separate state; for it would form too fluid an aliment, and would be deficient in a due proportion of non-nitrogenous or heat-producing material. In many country parts of Ireland it is, however, used as human food whenever beasts are killed at home; but the butchers always cast it away. On the continent, also, the blood is invariably used, in combination with vegetable matters, as food for pigs.

Carnivorous animals also, of course, consume the blood as well as the flesh of the animals on which they prey; and in Magendie's famous experiments it was found that dogs continued to live when fed exclusively on raw meat, which retains some blood; whereas they sank if fed alone on fibre, albumen, or gelatin. I shall next try to show that the meat from which blood has been abstracted is positively injured. Flesh is of a highly acid reaction, from the lactic acid, of which it contains about 6½ per 1000, and from inosinic, and probably some other acids. In this condition it is unsuitable as human food. Milk and the egg, the two typically perfect animal foods which all-bountiful Nature has provided for all living creatures, are alkaline. To the strongly-marked acidity of bled veal its frequent unwholesomeness and indigestibility may be attributed; for Liebig has shown that its ash contains 15 per cent. of phosphoric acid over that which is required to make salts with the alkalies present. It is also composed of a less digestible form of fibre, for it is not soluble in dilute hydrochloric acid. I have found it sometimes to putrefy rapidly, and to have a sour smell. To diminish this acidity, meat requires to be kept some time before being used, or until it becomes alkaline, from incipient decomposition evolving ammonia. Now, it is very hard to determine how far this alkaline putrescence should proceed; and although the gastric juice has undoubtedly antiseptic properties, food may be introduced into the system in a very unfit state. Meat also loses in weight and substance by being kept; and I fear also that, to avoid pecuniary loss, if is often sold and dressed in a condition most injurious, or even poisonous. The blood is an alkaline fluid, and if retained in the flesh would neutralize its acidity, and thus render it fit for food much sooner. The muscles of animals stiffen a few hours after death, which is probably mainly owing to the blood becoming solid within the vessels, for it scarcely occurs in the carcase which has been bled. It is well to wait till this stiffening has disappeared, for the meat is then certainly more tender and digestible.

We eat many animals which are killed by means which leave the blood within them; for instance, hares, rabbits, pheasants, and indeed all game. Venison, too, is often killed without bleeding; and although the animal's throat is in other cases divided after it has been shot, much of its blood is retained, owing to the stoppage of the heart's action. Now, it must be allowed that the flesh of these animals is of the most wholesome and digestible nature—a property which, as well as their delicious flavor, is mainly due to the blood they retain. Fish, too, are killed without losing blood, except, perhaps, when the cruel plan of crimping is adopted. It has often been remarked that hares caught in snares, and thus strangled, are much less digestible than those shot or hunted. This I would explain by the fact that much blood is lost by being drawn into the lungs and other internal organs while the creature is being suffocated. It has been proved, however, that no method of slaughtering will entirely remove all trace of blood from animals, for the microscope or chemical analysis will still discover it. Any prohibition, therefore, against partaking of blood will be virtually a prohibition against eating flesh at all. As well might Shylock have endeavored to remove his pound of flesh without bloodshed as might the butcher try to drain absolutely all the blood of the animals he slaughters. Dr. Lankester, one of the best authorities on dietetic questions, and who is favorable to the principle I am advocating, says—"I have no hesitation in saying that the blood you take away is just as good food as the blood you leave in, and that you would do much better to leave all the blood in the animal."

As is now becoming generally known, a soup of the highest value can be made by digesting meat in cold water to which is added a few drops of hydrochloric acid. I have often witnessed its admirable restorative properties in many debilitating diseases; and they mainly depend on the fact that it contains the soluble constituents of the blood, which are most readily assimilated by persons of even the weakest digestive powers.

The equestrian people of the American pampas and prairies, as well as Europeans who are sojourning there for many months, during the hunting season, are well known to live on an exclusively animal diet. The Indians kill the animals they use as food almost always with the bow and arrow, and, as far as I can ascertain, they do not abstract their blood. Indeed, they could not have time to do so before the animals died, for they ride rapidly about through the vast herds of buffaloes. They cut the meat in long strips, which they dry in the sun; and this food, which they call "tajo," confers on them a degree of muscular health and vigor scarcely ever attained by any European race. I am also informed that our troops during the Peninsular War were accustomed to kill their meat by shooting or with the lance, and without any further artistic butchery, and thus obtained food of the finest quality. There are, on the other hand, instances of regiments being decimated by being compelled to live on the flesh of tame cattle slaughtered in the ordinary way.

As regards the modes of slaughtering which would effectually retain the blood in the carcase, I shall first notice that patented by Dr. Carson. The beast is firmly fixed on its back, and tightly bound, so as to prevent struggling as much as possible, and a small cut is made through the skin over the space between the fifth and sixth ribs; this in the sheep may be found about two inches below, and behind, the shoulder-joint, and the more easily as the skin is not there covered by wool. Through these cuts there are thrust in two sharp-pointed tubes, with openings at the sides, and to the ends of which are attached bags, containing about a quart of air, which is then forced into the cavities which lie between the lung and the walls of the chest. The air may be prevented from escaping by the side of the tube by a button, with a concave surface towards the animal, filled with grease or soft putty. The air which is pressed upon the lung exerts still farther force in collapsing the lung when the heat of the body rarefies it. I have also injected water, which, being so incompressible, prevents the expansion of the lungs. The animal almost instantaneously dies, and suffers much less pain than in the ordinary method, which I have previously described. This method so effectually compresses the lungs, heart and large vessels, that the blood and other fluids remain distributed through the body just as they were during life, whereas these cavities are empty and contracted. This can be tested by making a cut into the neck, when but a spoonful or two of blood will issue, where very many pounds would if the animal were killed in the usual way; and then, even long after death, lymph, serum, and muscle-juice would drain into the cavity of chest, as atmospheric pressure does not bear on its outer surface.

Another way, which it strikes me would be even more rapid and painless, would be the injection of a little air into the jugular vein. This, as the surgeon knows from several fatal accidents which have befallen the human subject, kills rapidly by the air mixing with the blood in the right side of the heart, and thus preventing its transmission to the lungs. Horses which are rendered useless by severe accidents are sometimes destroyed by this method. If a large volume of air be forced in by a powerful syringe, death occurs almost instantaneously, and the heart and great vessels will be found contracted. If a narrow knife were inserted between the head and the first bone of the neck, and thrust obliquely upwards, death would also supervene immediately by injury to that part of the brain which anatomists call the "lethal point." A somewhat similar method is adopted, according to Stephens's "Book of the Farm," in the abattoirs of Montmartre, Paris, and in Spain and Germany, namely, dividing the spinal cord with a chisel and hammer between the second and third bones of the neck. These two latter methods are almost entirely painless; but butchers object to them, as they prevent the creatures struggling, and thus forcing out the blood.

I have conversed with several butchers, and practical and observant men, and the principle I have advocated has met with considerable support amongst them. Nearly all allow that meat with the blood retained would be most suitable for making soup, as the color would be no objection. Many of them have expressed a prejudice against the darker color of the meat, which would be the case if the animal were strangled; but all the plans I have mentioned are entirely different, for they retain the blood in the tissues, where it remains bright and free from carbon, if the animal be kept from struggling; blood issues from muscle as bright as it enters, if that tissue be kept quiescent. Any dark color would also disappear as soon as the temperature is raised in cooking to 158°. Others have said that such meat would decompose rapidly; but the fact that hares and other game can be kept longer than most meat seems to contradict this statement, which I think is derived from the fact that blood by itself does, owing to its alkalinity, soon putrefy; but, even if it were true, such an objection has no weight; for the meat in which the blood is retained is much sooner fit for use, and in large institutions it could be consumed shortly after it was slaughtered.

There are many other topics connected with the preparation of flesh meat—as, for instance, the best modes of detecting such as is unfit for human use, from diseases or the parasites from which the animal may have suffered—and the most scientific plans of cooking. But I fear I may have already exhausted your patience. On some other occasion I may strive to interest you upon some other subject concerning public health; for although hygienic science has determined many valuable facts and laws, they have not yet been utilized by diffusion even among the educated public.

[Specimens of the meat in the raw, boiled, roasted and fried conditions were then exhibited, and were pronounced excellent by all present.]—*Journal of the Dublin Royal Society.*

ON THE BRAIN OF A BUSHWOMAN.

By John Marshall, F.R.S., Surgeon to University College Hospital.

The Bushwoman was aged, and about 5 feet high—unusual for her race.

The form of the cranium is a long narrow ovoid—less dolichocephalic, however, than the negro skull; the face is high-cheeked, and the nose very small and flattened. The frontal sinuses are absent, and the walls of the cranium are thick—so thick that its internal capacity is less than would be expected from its outward form and size, being equal to 35 oz. av. of water, or 60·64 cubic inches, which, for the height of the Bushwoman's body, is decidedly, but not very small.

The actual weight of the preserved encephalon proved to be 21·77 oz. av., which would probably represent, as the author shows, 31·5 oz. for the weight of the recent brain enclosed in its membranes. Allowance being made for the height of the body, this is less by 8·5 oz. than the average weight of the brains of European females of the same age, as estimated from the Tables of Dr. Boyd, published in the Philosophical Transactions for 1861.

The cerebrum proper probably weighed, in its recent state, 27·25 oz., the cerebellum 3·45 oz., and the pons with the medulla oblongata ·8 oz.

The ratio of the cerebrum to the cerebellum was as usual, 7·7 to 1; that of the cerebrum to the body was probably as 1 to 52, and that of the cerebellum to the body as 1 to 418, instead of the usual ratios of 1 to 41, and 1 to 328.

An examination of the general form of the cerebrum shows that it is small, but long—defective in width, and especially in height. Its outlines and surfaces are angular and flat, instead of rounded and full. The frontal region is very narrow, shallow, much excavated below, and compressed laterally near the entrance of the Sylvian fissure. The parietal region is low, but prominent laterally; the occipital region is long, but defective in height; and the temporal region is long, but narrow.

The cerebrum overlaps the cerebellum by ·5 inch, which is as great an absolute overlap as is usual in European brains, but less relatively to the length of the brain, which is very long in the Bushwoman.

The fissures, lobes, and convolutions are then described at length, and compared with those of the ordinary European brain, with those of the Hottentot Venus's brain figured by Gratiolet, and with those of the young Chimpanzee. It is impossible to give in an abstract even an outline of the facts recorded in this part of the paper.

The general result of the inquiry is to show that the fissures are rather more complex than in the brain of the Hottentot Venus, but much less so than in the European. They are rather more complex on the left than on the right side of the brain. They are widely separated from those of the Ape's brain.

The author concludes—1. That all the convolutions proper to man are present, but, as compared with the European brain, are much more simple, and less marked with secondary sulci. The greatest deficiency is in the occipital and orbital convolutions.

2. That the convolutions, taken generally, are rather more complex than those represented in Gratiolet's figure of the Hottentot Venus's

brain, which may be partly due to the obliteration of details in the latter during its long period of preservation.

3 & 4. That the resemblance between the Bushwoman's brain and the Hottentot Venus's brain is sufficient to justify the conclusion that the latter was not an idiot, or a defectively developed individual; but both brains, as compared with the European, have an infantile simplicity, characteristic partly of sex, but chiefly of race.

5. That the convolutions being more simple, can be more easily traced and compared on the two sides than usual, but still show abundant evidences of the asymmetry characteristic of man.

6. That there is a greater difference between the Bushwoman's cerebrum and the highest Ape's cerebrum than between it and the European cerebrum; but a less specific difference between it and the European than between the Chimpanzee and the Orang; and, of course, much less than between the highest and lowest Quadrumanous brains. There is, however, less difference between the Bushwoman and the highest Ape than between the latter and the lowest Quadrumanous animal.

7. The general results, the author thinks, justify the expectation that characteristic differences of degree of cerebral development may hereafter be found in the several leading races of mankind.

The author then proceeds to describe the color and relative proportions of the grey and white substance, the commissures, ventricles, and ganglionic masses.

The commissural fibres of the corpus callosum are very deficient in the Bushwoman; and the other commissures are also small. The body and anterior cornu of the lateral ventricle are also small; but the posterior cornu and its contained parts are very large.

In the cerebellum, the median parts appear to be somewhat less developed than the hemispheres. Its transverse commissural fibres are more largely developed than the same system of fibres in the European brain; the Chimpanzee standing, in this respect, still lower. The laminæ of the cerebellum are even more numerous than in the European specimen with which the Bushwoman's brain was compared. The cerebellum seems to be more perfectly developed than the cerebrum.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, FEBRUARY 11, 1864.

Passage of an Ambulance Bill.—At last the friends of a general ambulance system may congratulate themselves upon the passage of a bill securing an efficient organization for this purpose, which extends in its provisions to all our forces in the field. The pressure of public opinion has been too much for individual opposition, and this long-needed and much-desired measure is in a fair way to become the law of the land. Boston may well feel an honest pride in this result, for it is fresh in the remembrance of all that the first movement to excite the interest of the public in this benevolent project was made by the medical profession in this place; and to a Boston physician, Dr. Henry I. Bowditch, is due, more than to any other single individual, the persistent effort by which the strenuous opposition by which it was so long and successfully overborne has been completely swept away. So complete is this triumph that we see the gentleman to whom this opposition may be said to have been principally due, now standing forth as the advocate of the measure which has just passed the Senate of the United States. We do not care to dwell on this remarkable fact, but only note it as a new instance of the great prevailing power of the truth.

We regret to see in some quarters a disposition to speak disparagingly of gentlemen here, as if they had been inclined to push their own personal schemes in this matter to the exclusion of those which were recommended by the military authorities. The New York *Medical Times* some weeks since made such a statement, which it has not yet retracted, although notified by us that there was no foundation for it. Within two or three days, also, we have noticed in one of our daily papers a slur upon the "stay-at-home" gentlemen who were so zealous to introduce an ambulance system of their own, which attempt had met with a signal failure. The writer seems most anxious that the friends of the system here should get no credit whatever for their interest or their labors. Now all this is very unfair, ungenerous and untrue. As we stated before, the great effort here has been to secure *some* system which should be complete and have the binding sanction of the public law; and we have yet to meet the first man who does not cordially accept Senator Wilson's bill, based on the recent order of General Meade, as all-sufficient in its provisions. The following is the bill which has passed the Senate:—

A Bill to establish a uniform System of Ambulances in the Armies of the United States.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the medical director, or chief medical officer, of each army corps, shall, under the control of the medical director of the army to which such army corps belongs, have the direction and supervision of all ambulances, medicine, and other wagons, horses, harness, and other fixtures appertaining thereto, and of all officers and men who may be detailed or employed to assist him in the management thereof, in the army corps in which he may be serving.

Sect. 2. And be it further enacted, That the commanding officer of each army corps shall detail officers and enlisted men for service in the ambulance corps of each army corps, upon the following basis, viz.: one captain, who shall be commandant of said ambulance corps; one first lieutenant for each division in such army corps; one second lieutenant for each brigade in such army corps; one sargeant for each regiment in such army corps; three privates for each ambulance, and one private for each wagon; and the officers and non-commissioned officers of the ambulance corps shall be mounted: Provided, That the officers, non-commissioned officers and privates so detailed for each army corps shall be examined by a board of medical officers of such army corps as to their fitness for such duty; and that such as are found to be not qualified shall be rejected, and others detailed in their stead.

SECT. 3. And be it further enacted, That there shall be allowed and furnished to each army corps two-horse ambulances, upon the following basis, viz.: three to each regiment of infantry of five hundred men or more; two to each regiment of infantry of more than two hundred and less than five hundred men; and one to each regiment of infantry of less than two hundred men; two to each regiment of cavalry of five hundred men or more; and one to each regiment of cavalry of less than five hundred men; one to each battery of artillery—to which battery of artillery it shall be permanently attached; to the headquarters of each army corps two such ambulances; and to each division train of ambulances two army wagons; and ambulances shall be allowed and furnished to divisions, brigades, and commands not attached to any army corps upon the same basis; and each ambulance shall be provided with such number of stretchers and other appliances as shall be prescribed by the Surgeon-General: Provided, That the ambulances and wagons herein mentioned shall be furnished, so far as practicable, from the ambulances and wagons now in the service.

SECT. 4. And be it further enacted, That the captain shall be the commander of all the ambulances, medicine and other wagons in the corps, under the immediate direction of the medical director, or chief medical officer, of the army corps to which the ambulance corps belongs. He shall pay special attention to the condition of the ambulances, wagons, horses, harness, and other fixtures appertaining thereto, and see that they are at all times in readiness for service; that the officers and men of the ambulance corps are properly instructed in their duties, and that their duties are performed, and that the regulations which may be prescribed by the Secretary of War, or the Surgeon-General, for the government of the ambulance corps, are strictly observed by those under his command. It shall be his duty to institute a drill in his corps, instructing his men in the most easy and expeditious manner of moving the sick and wounded, and to require in all cases that the sick and wounded shall be treated with gentleness and care, and that the ambulances and wagons are at all times provided with attendants, drivers, horses and whatever may be necessary for their efficiency; and it shall be his duty also to see that the ambulances are not used for any other purpose than that for which they are designed and ordered. It shall be the duty of the medical director, or chief medical officer, of the army corps, previous to a march, and previous to and in time of action, or whenever it may be necessary to use the ambulances, to issue the proper orders to the captain for the distribution and management of the same; for collecting the sick and wounded, and conveying them to their destination. And it shall be the duty of the captain faithfully and diligently to execute such orders; and the officers of the ambulance corps, including the medical director, shall make such reports, from time to time, as may be required by the Secretary of War, the Surgeon-General, the medical director of the army, or the commanding officer of the army corps in which they may be serving; and all reports to higher anthority than the commanding officer of the army corps shall be transmitted through the medical director of the army to which such army corps belongs.

SECT. 5. And be it further enacted, That the first lieutenant assigned to the ambulance corps for a division shall have complete control, under the captain of his corps and the medical director of the army corps, of all the ambulances, medicine, and other wagons, horses, and men in that portion of the ambulance corps. He shall be the acting assistant quartermaster for that portion of the ambulance corps, and will receipt for and be responsible for all the property belonging to it, and be held responsible for any deficiency in anything appertaining thereto. He will have a travelling cavalry forge, a blacksmith and a saddler, who will be under his orders to enable him to keep his train in order. He shall have authority to draw supplies from the depot quartermaster, upon requisitions approved by the captain of his corps, the medical director, and the commander of the army corps to which he is attached. It shall be his duty to exercise a constant supervision over his train in every particular, and keep it at all times ready for service.

SECT. 6. And be it further enacted, That the second lieutenant shall have command of the portion of the ambulance corps for a brigade, and shall be under the immediate orders of the first lieutenant, and he shall exercise a careful supervision over the sergeants and privates assigned to the portion of the ambulance corps for his brigade; and it shall be the duty of the sergeants to conduct the drills and inspections of the ambulances under his orders of their respective regiments.

SECT. 7. And be it further enacted, That the ambulances in the armies of the United States shall be used only for the transportation of the sick and wounded, and, in urgent cases only, for medical supplies, and all persons shall be prohibited from using them, or requiring them to be used, for any other purpose. It shall be the duty of the officers of the ambulance corps to report to the commander of the army corps any violation of the provisions of this section, or any attempt to violate the same. And any officer who shall use an ambulance, or require it to be used, for any other purpose than as provided in this section, shall, for the first offence, be publicly reprimanded by the commander of the army corps in which he may be serving, and for the second offence shall be dismissed from the service.

SECT. 8. And be it further enacted, That no person except the proper medical officers, or the officers, non-commissioned officers and privates of the ambulance corps, or such persons as may be specially assigned, by competent military authority, to duty with the ambulance corps for the occasion, shall be permitted to take or accompany sick or wounded men to the rear, either on the march or upon the field of battle.

SECT. 9. And be it further enacted, That the officers, non-commissioned officers and privates of the ambulance corps, shall be designated by such uniform or in such manner as the Secretary of War shall deem proper; Provided, That officers and men may be relieved from service in said corps, and others detailed to the same, subject to the examination provided in the second section of this act, in the discretion of the commanders of the armies in which they may be serving.

SECT. 10. And be it further enacted, That it shall be the duty of the commander of the army corps to transmit to the Adjutant-General the names and rank of all officers and enlisted men detailed for service in the ambulance corps of such army corps, stating the organizations from which they may have been so detailed; and if such officers and men belong to volunteer organizations, the Adjutant General shall thereupon notify the Governors of the several States in which such organizations were raised of their detail for such service; and it shall be the duty of the commander of the army corps to report to the Adjutant-General from time to time the conduct and behavior of the officers and enlisted men of the ambulance corps, and the Adjutant-General shall forward copies of such reports, so far as they relate to officers and enlisted men of volunteer organizations, to the Governors of the States in which such organizations were raised.

SECT. 11. And be it further enacted, That nothing in this act shall be construed to diminish or impair the rightful authority of the commanders of armies, army corps, or separate detachments, over the medical and other officers, and the non-commissioned officers and privates of their respective commands.

SECT. 12. And be it further enacted, That horse and mule litters may be adopted or authorized by the Secretary of War in lieu of ambulances when judged necessary, under such rules and regulations as may be prescribed by the medical director of each army.

DR. S. L. SPRAGUE, we hear, was some weeks since reinstated in his office of Examiner of Pension Claimants, from the duties of which he had been suspended several months before. It would seem, therefore, that in this instance, as in the case of Dr. Graves, the Commissioner must have been influenced in his action by false representations. Now that these gentlemen are restored to the full exercise of their powers as examiners, we trust that their examinations will be respected at Washington. In repeated instances it has happened, as we learn through the pension agents here, soldiers, after having been pronounced upon by these gentlemen and Dr. Shaw, have been required by orders from Washington to undergo a second examination by another examiner, even in cases of the clearest and most undoubted character, thus subjecting the applicant to unnecessary vexation, delay and expense. Either these gentlemen are fit for the office they hold and are therefore worthy of confidence, or they are not. If the former is true, it is little better than an insult to repudiate their reports; if the latter, the sooner their places are filled by reliable men the better. The office of examiner is intended for the benefit of our suffering soldiers, not for the pecuniary advantage of any official. We are waiting with much interest for the action of the Commissioner in the case of Dr. Shaw, whose removal we believe to have been as unwarrantable as that of either of the gentlemen who have been reinstated.

Recto-Vesical Lithotomy in the Male.—The Paris correspondent of the London *Lancet* writes as follows:—" You published last year a paper by Mr James Lane ' On Lithotomy in the Female Bladder,' in favor of the vesico-vaginal incision. Dr. Marion Sims, of New York, now practising in Paris, considers that the facility and invariable success with which a cut in the vesico-vaginal septum may now be closed suggest this as ' the only justifiable operation for stone in the female bladder.' He performed this operation first in 1850. It has since been repeatedly performed in America by Dr. Emmett, of the Women's Hospital of New York, and by Dr. Bennett, of Connecticut. The simplicity, safety, and unfailing success of the operation are spoken of in warm terms.

" The application of this to the parallel method of *recto-vesical lithotomy in the male,* is a subject worthy of careful consideration. Recto-vesical lithotomy *in the adult* is a proceeding which was used long before the introduction of metallic sutures, and was followed with modifications by Mr. Lloyd, of St. Bartholomew's. Without these sutures it was liable to a serious objection—the occasional persistence of recto-vesical fistula. The silver-wire sutures, however, promise to obviate this inconvenience. Dr. Sims has mentioned to me a case in which Dr. Bauer, of New York, operated by this plan in 1859, Dr. Sims putting in the sutures. He says :—' The patient was placed on the left side, and my speculum was introduced into the rectum, exposing the anterior wall of the rectum, just as it would the vagina in the female. A sound was passed into the bladder. The Doctor entered the blade of a bistoury in the triangular space bounded by the prostate, the vesiculæ seminales, and the peritoneal reduplication. He passed the finger through this opening, felt the stone, and removed it with the forceps without the least trouble. The operation was done as quickly and as easily as it would have been in the female through the vaginal septum. After the removal of the stone, Dr. Bauer kindly asked me to close the wound with silver sutures, which I did, introducing some five or six wires with the same facility as in the vagina. There was no leakage of urine. The patient recovered without the least trouble of any sort. The wires were removed on the eighth day, and on the ninth day the patient rode in a carriage with Dr. Bauer a distance of four or five miles, to call on and report himself to our distinguished countryman, Dr. Mott. The facility and safety of executing recto-vaginal lithotomy (except in children, for anatomical reasons), and the success of closing at once the cut by the introduction of metallic sutures, ought to make this the operation in the male.' "

The following are the formulæ for the solutions of the protoxide of iron manufactured by Gardner & Carrick, and advertised in this Journal:—Liq. Ferri Protoxidi dulc.—Solutionis ferri protoxidi, i℥.; syrupis simplicis, ℥i.; tinct. aurantii cort., gtt. ii.; tinct. limon. cort., gtt. iij. Liq. ferri protoxidi amar.—Liq. ferri protoxidi dulc., ℥iij.; tinct. quassiæ, ʒij.

Prof. R. C. Stiles, M.D., has resigned his position in the Army, and will resume his duties in the Medical Department of the University of Vermont this session.

Surgeon Josiah Curtis, U.S.V., has been relieved from duty in the Department of the Susquehanna, and ordered to report in person without delay to Assistant Surgeon-General Wood, at Louisville, Ky., "for duty in the field."

Surgeon E. B. Dalton, U.S.V., has returned from leave of absence, and resumed his duties as Surgeon-in-charge, Balfour Hospital, Portsmouth, Va.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, February 6th, 1864.

DEATHS.

	Males.	*Females.*	*Total*
Deaths during the week - - - - - - - -	46	50	96
Ave. mortality of corresponding weeks for ten years, 1853—1863,	40.6	35.9	76.5
Average corrected to increased population - - - -	00	00	84.09
Death of persons above 90 - - - - - - - -	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
17	3	10	7	0	0	1	1

Notice.—The 48th part of Braithwaite's Retrospect was mailed from this office on Tuesday, Feb. 9th, to all those members of the Massachusetts Medical Society whose vouchers of the payment of their assessments have been received.

The Title-page and Index to Vol. LXIX. will be sent to subscribers in our next issue.

Books and Pamphlets Received.—Lectures on Orthopædic Surgery, delivered at the Brooklyn Medical and Surgical Institute. By Louis Bauer, M.D., M.R.C.S. Eng.—The Nervous and Vascular Connection between Mother and Fœtus in Utero. By John O'Reilly, M.D., F.R.C.S.I.—An Answer to the Question "Why does the Sanitary Commission need so much Money?"—Charges and Specifications, with copy of Orders, and Defence of Accused, read before a Court Martial convened in the city of New York, December 10th, 1863.—Reports of the Directors and Superintendent of the "Washingtonian Home," located at 887 Washington Street, Boston, for the year 1863.

Died,—At Wrentham, Jan. 22d, Dr. Jason H. Archer, late of Fall River, aged 69.—At New York, Feb. 6th, Dr. Abel Wilder, of Blackstone, Mass.

Deaths in Boston for the week ending Saturday noon, Feb. 6th, 96. Males, 46—Females, 50.—Apoplexy, 2—inflammation of the bowels, 1—congestion of the brain, 4—inflammation of the brain, 4—bronchitis, 2—burns, 1—cancer, 2—chicken pox, 1—consumption, 17—convulsions, 5—croup, 3—diarrhœa, 1—diphtheria, 1—dropsy, 1—dropsy of the brain, 1—erysipelas, 2—scarlet fever, 10—typhoid fever, 1—hæmorrhage, 1—disease of the heart, 7—infantile disease, 2—intemperance, 1—inflammation of the lungs, 7—marasmus, 1—old age, 3—paralysis, 2—puerperal disease, 1—premature birth, 2—disease of the stomach, 2—ulcers, 1—unknown, 7.

Under 5 years of age. 39—between 5 and 20 years, 10—between 20 and 40 years, 13—between 40 and 60 years, 17—above 60 years, 17. Born in the United States, 64—Ireland, 22—other places, 10.

THE

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NOTES OF PRACTICE IN THE U. S. A. GENERAL HOSPITAL, BATON ROUGE, LA., DURING THE YEAR 1863.

[Reported to Surgeon-general DALE by S. K. TOWLE, Surgeon 30th Regiment Mass. Volunteers, and communicated to the Boston Medical and Surgical Journal.]

THE near approach of the close of the year suggests a summing up of the results, and a balancing of accounts professionally as well as pecuniarily, and a period of comparative leisure enables me to note for your inspection a few items of experience going to make up my total for A. D. 1863.

About the middle of May (1863), I was ordered to take charge of the hospital in the building of the Louisiana Blind and Mute Asylum at Baton Rouge, and I have continued in the position to the present time. The main building is five stories high, with wings of two stories, and finely situated on an elevation about thirty feet above, and six hundred yards back from the levee. The building is divided into various sized rooms, accommodating from twelve to fifty patients in each, with broad halls extending through the main building on every floor, and has a broad balcony running all around the two lower stories. The windows are large, hung on pulleys, and in most of the wards on both sides, thus affording as thorough ventilation as possible. There are no water-closets connected with the building, and all those patients not able to go out—and from the upper wards it is a wearisome journey—are obliged to attend to the calls of nature in the wards. This is a very serious deficiency, not only causing much extra labor for nurses, but as all the excrements must be carried out in buckets down the central stairway, it renders it very difficult to keep the hospital free from odor. Why a public building erected at a cost of near four hundred thousand dollars, on a site drained with perfect ease into the river, should have been built without a single water-closet, is not easily understood. As a means of partially obviating this deficiency, I made efforts to get constructed, outside the main building, a large elevator, or "dumb waiter," with landings on each story, so that all slops could be carried down that way, as well as patients, food, &c., carried up; but from the lack of the necessary orders it was not done.

Although the site of this building is unusually elevated for this section of country, yet it is far from being free from the malarial influence of the ubiquitous southern swamp. Within three hundred yards of the rear of the wings runs a narrow, ill-drained bog extending to the river, and to the west, from which direction are the prevailing winds, but a mile across the river, is the broad swamp skirting all the lower Mississippi. The great elevation of the upper wards, however, renders them more nearly free from malarial poison than any locality within my knowledge along the Mississippi in Louisiana excepting, perhaps, the higher buildings in the better and paved portions of New Orleans.

The number of patients at the time I took charge was about two hundred and fifty, and gradually increased until I reported over nine hundred, then decreased again, until now I have about as many as at first. This building being insufficient for the accommodation of that number, the Court House and a hall, both near by, and many hospital tents, were temporarily occupied. The cases admitted were from the 19th Army Corps, engaged in the siege of Port Hudson, but twenty miles distant, and were at least of a grade as serious as the average sent from the front, many of the lighter cases being sent to places offering inferior accommodations.

During the period of my service to the present date, about eight months, there have been admitted patients suffering from wounds, 547; from disease, 1618; total, 2165. During the same period the record shows—

Returned to duty	1625
Transferred to convalescent camp . . .	121
Furloughed	104
Discharged	40
Died, {from wounds, 59 from disease, 224}	283
Total, ...	2173

Thus showing a mortality from wounds of 10·7 per cent., and from disease of 13·8 per cent., while a little more than seven tenths of all admitted were returned to their regiments.

Of the cases of disease the numbers registered, in official nomenclature, as "miasmatic diseases," are shown in the following table. In the cases there tabulated, only a portion of the diseases classed as "miasmatic" being included, little "miasmatic" influence was noted other than that from the miasm or malaria of the low lands and swamps of this country; hence in my observations I shall use the term "miasm" as synonymous with "marsh-miasm," or "malaria," that being *the* miasm with which I have had to do.

Of the remaining four hundred cases of disease reported, about one hundred, which were convalescents in various stages of recovery from the above diseases, received from other hospitals when they were discontinued, and presenting at their extrance here symptoms of debility, are not included in this statement. The balance of three hundred was divided between the multitude of diseases to which human flesh is heir, and include also a few complaints known only to the fruitful imagination of "old sogers" and the conscript candidates for "exemption."

Disease.	No. of Cases.	No. of Deaths.	Mortality, Pr. ct.
Typhoid fever	62	20	32·2
Typho-malarial fever	428	63	14·7
Remittent fever	81	6	7.4
Intermittent fever	140	2	1·4
Congestive fever	5	2	40·0
Total malarial fevers	716	93	13·0
Acute diarrhœa	77	1	1·3
Chronic diarrhœa	314	82	26·1
Total diarrhœa	391	83	21·5
Acute dysentery	40	5	12·5
Chronic dysentery	53	21	39·6
Total dysentery	93	26	27·9
Total disentery and diarrhœa	484	109	22·5
Total "miasmatic diseases"	1200	202	16·8

It is not to be supposed that in all cases the recorded diagnosis is strictly correct, for with a steamboat load of sick and wounded to provide for at once, perhaps in the night, one would need the aid of a special sense to always arrive at the exact truth in regard to chronic, complicated cases. Indeed, the symptoms of many of the cases would indicate rather a combination of diseases than any one disease—fevers being inexplicably combined with diarrhœa or dysentery, and *vice versâ,* so that one would hardly know under which class to make the record. And again with the different variety of fevers, the record will often depend upon the period of observation; an intermittent, with well-marked stages, will, if neglected, often in a few days become an equally well-marked remittent, or typho-malarial, or a little farther on will prominently exhibit advanced typhoid symptoms; or perhaps a few weeks or months later die from chronic diarrhœa or dysentery. Between acute diarrhœa and acute dysentery the distinction is usually made without difficulty, but in chronic cases there seldom is marked difference; or rather, perhaps, protracted and fatal cases of diarrhœa, with few if any exceptions, exhibit the dysenteric stools, tenesmus, and ulceration of the large intestine and rectum. So that in the army, and especially in a malarial region—and our armies have so far found few localities not infested with miasmatic poison—while the statistics of the class of "miasmatic diseases" as a whole will approximate very nearly to the truth, the records of the different subdivisions of the class will of necessity be much less exact.

At the risk of being tiresome, I will make a few notes in regard to the symptoms and treatment of some of the diseases in the foregoing enumeration, beginning with the simple, but not the less troublesome *intermittent fever.*

Before entering the army, my knowledge of this disease was almost entirely theoretical, but for the past two and a half years few friends have become as familiar as "the shakes," both by observation and experience, and I fancy I can "do" a chill with all the grace and *nonchalance* of an Indianian, and then achieve a sweat such as would gladden the heart of the most enthusiastic admirer of the "steam-box."

In the treatment of this disease, I have never yet been disappointed in interrupting its course with sulphate of quinine, and therefore have never used anything else for an anti-periodic when I could obtain that drug. Many cases of long standing have come under my notice and care, and not a few that were reported incurable by quinine; but with the needed attention to the bowels, diet, exposure, and particularly to the administration of the medicine to insure that it be taken, and at the proper time, I have invariably found the course of the disease ended by the time for the third, or at the farthest the fourth chill. Of course if the patient is still exposed to the malarial poison, and especially if, as is often the case, the quinine is discontinued as soon as the regular order of the disease is interrupted, a fresh attack is almost certain to occur within a short time. No one thing in the general care of malarial disease seems to me of more importance than for the patient to be placed in a house, and kept rigorously in from the influence of the mid-day sun and damp night air until convalescence is well established. I have known many cases of intermittent fever, pronounced incurable by quinine, to recover at once, without a single dose of medicine, on being removed from tents to a house, and being kept constantly in doors for a week or ten days. While on the Potomac, I was so well pleased with the progress of typhoid fever cases in hospital tents that I thought them quite as good as houses; but since being in this Department I have become convinced that cases of malarial disease do very much better in buildings than in tents—the canvas protecting the patients much less than boards from the two great excitants to the action of miasmatic poison, the heat of the sun and the chilling, heavy dews at night.

I have never been in the habit of giving mercurials or other cathartics, as a preliminary to quinine, unless clearly indicated as necessary were no anti-periodic required; and have often been surprised at the rapidity with which the vitiated secretions would become normal on the arrest of intermittents by quinine alone. Few cases in my experience have required, under favorable circumstances, more than fifteen grains of sulphate of quinine in twenty-four hours in solution during the intermission, though occasionally twenty or even thirty may be necessary. Five-grain doses, given ten, six and two hours before the expected time of the chill, has been the most frequent manner of prescribing the solution in ordinary cases, the quantity being one third more if given in pill, the medicine being continued in diminished doses for a week or ten days after the interruption of the paroxysms in cases of much standing. The addition of capsicum to quinine has appeared to me of great benefit, and in chronic debilitated cases alcoholic stimulants are indicated and do good; but I have never found it safe to rely on "quinated whiskey" for the cure of intermittents, though useful in convalescence.

Although few cases of intermittent fever prove directly fatal, yet it is far from being, in the army, the innocent disease statistics would indicate. A large proportion of the cases reported as belonging to all the other "miasmatic diseases," are developed from imperfectly cured intermittents; and I am quite confident that in this region no one measure would so much reduce the number of cases of chronic diarrhœa of an intractable nature, as strict and persevering attention by regimental medical officers to the thorough eradication of all malarial poison in cases of intermittent fever. It is not sufficient to advise these men to come and get treatment for a few days after their chills cease, or to give them quinine powders to carry in their pockets, but it should be made a certainty that the medicine is swallowed as directed, and that they are exposed no more than absolutely necessary for a week or two at least.

Of the so-called *congestive fever* I have seen but few cases this season, only five having been admitted here, two proving fatal. Nor have the cases coming under my care this year presented the suddenness and violence of attack and rapid progress of those I treated during the summer of 1862, from amongst the troops that had spent June and July in the swamps opposite Vicksburg, Miss., digging under the burning sun in the famous ditch that was to have turned the Mississippi from its course, but failed from the fact that the stubborn old Father of Waters "couldn't see it." But though less violent, the same condition of collapse was presented this year as last, with cold, shrivelled, clammy skin, great restlessness, and partial or complete insensibility.

Mustard paste externally, with brandy and quinine internally, all used very freely, comprise the staple of the treatment this, as last year, the result being not much different. If once a decided reaction can be brought about, and the stomach does not reject medicine, recovery is almost sure, though often very tedious. Hot bathing, with or without the addition of mustard, I tried in a few cases last year, but soon became convinced that the disturbance of the patient by handling, and the exposure of the skin to the air, did more harm than the bathing did good, and I fell back to the clear mustard paste, to which I adhere with a reliance almost equal to that of a venerable country neighborhood nurse in her specifics.

And here I would remark, that in malarial disease, much as the condition of the skin requires attention, in my opinion bathing of the whole person should be practised with much discrimination and care. I have no great faith in the curative powers of dirt, but I often order dirty patients sick with miasmatic disease to be put to bed on admission unwashed, directing the cleansing process to be performed piecemeal, and with as little exposure as possible of wet skin to the air of even a well-warmed ward.

In August, 1862, a patient convalescing in my regimental hospital from malarial fever, who had recovered sufficiently to walk out of doors, by a mistaken order of his commanding officer, was stripped and washed with water from the river. In the midst of the washing he fell back, gasped feebly a few times, and before I reached him, though near by, he was dead. The check to the circulation, slight as it might seem, was too great for the strength of the enfeebled and enervated heart to overcome, and the thin, pale, half-vitalized blood ceased to flow. I had before that, on theoretical grounds, forbidden general bathing by the nurses without my special order in each case, and this instance demonstrated but too forcibly the necessity for the caution, as well as the danger of any but medical officers directing at all for the sick, especially in cases where, as in miasmatic fever, the vital powers are reduced to a low ebb and the nervous system robbed of its energy and elasticity.

The majority of the cases of remittent fever that have come under my notice this season have been by no means well marked, but have presented decidedly mixed symptoms. Last year I had in my own regiment a very large number of cases (not having access now to the records I cannot tell how many, but counting by hundreds), nearly all presenting prominently the symptoms of remittent as described in the books—the sudden onset, raging fever, remission, distress and "sinking" sensation at the stomach, obstinate vomiting, often accompanied by extreme thirst, and derangement of the secretion of the liver, the skin in some cases being discolored almost as much as in yellow fever. Some of the cases, indeed, were at first pronounced "endemic yellow fever" by a medical friend, but as time passed on and no instance of black vomit appeared, he changed his diagnosis.

This year the remissions have been less marked, often nearly disappearing after two or three days, though the fever would continue, and enteric symptoms become more prominent than gastric.

In treating this disease I have found it of great importance to give medicine, as far as possible, in the pill form, and to allow not over an ounce of any liquid to be swallowed at a time, in order, if possible, to avoid the commencement of vomiting, as often it is exceedingly difficult to check it when once begun. As a general rule, the more intense the thirst, and the more vehement and incessant the demand for water, the less relief is experienced by drinking, and the more surely will a large draught of any liquid produce and perpetuate vomiting. Often, when refusing the affecting importunities of some poor fellow burning with gastritis for "just his fill once of ice-water," I have thought of the traditions handed down of those olden-time stern-faced fathers in medicine, who believed water deadly in its influence on fever patients; and have queried whether their anti-drink-and-bathing practice did not originate in treating fevers of malarial origin, with gastric inflammation and danger from sudden and fatal chills. Small pieces of ice, allowed to melt in the mouth, or swallowed at regular intervals of from five minutes to half an hour, I have found useful; but the unrestricted use of ice or ice-water in remittent fever, or indeed in any disease of the hot season in this climate, I believe to be productive of great injury. Lime-water added to milk and water, thin arrow-root gruel, or chicken-tea (for a broth will sometimes set well on a stomach that will reject a gruel), given in small quantities, with repeated applications of mustard to the epigastric region, I have found more successful in relieving vomiting than the exhibition of any drug. In some instances I have tried the large doses of calomel often given by our heroic Southern brethren in the profession, but the result was not such as to convert me to that style of practice. Three or four blue-mass pills, followed by a simple dose of castor oil (which is often retained when one is sure it will come up again), or perhaps merely an injection, have seemed to me to produce quite as good effects on the secretion of the liver as more powerful medication; and I am thoroughly convinced of the importance of avoiding all irritation of the inflamed mucous membrane of the stomach and duodenum as sedulously as one would that of the eye in acute ophthalmia.

Many of the cases registered *typhoid fever* were undoubtedly wholly of malarial origin, and without the pathognomonic rose spots of that disease; but at the date of their admission they had lost all the early characteristic symptoms, presenting only the prostrated, low, vitiated, semi-conscious condition of the last third of severe cases of typhoid fever. These cases of "typhoid state," as they might be called, were very serious, presenting a much larger percentage of deaths than those known to be typhoid fever proper; and in those cases that eventually recovered, convalescence was very slow and halting.

I do not remember to have seen this season, amongst those who had spent last year in this Department, a single case of typhoid fever such as we see in New England; and most of the cases occurring amongst the new comers after they had been here two months, were decidedly modified by the miasmatic surroundings. Indeed, one could almost tell how long a New England fever patient had been in this section of country by the type of his disease; a genuine case of uncomplicated typhoid being strictly pathognomonic of a recent Down-East Yankee, all uncontaminated in body and soul by the physical and moral miasm infesting this whole fertile wilderness of the Sunny South.

In all cases where there were any signs of malarial complication, ten, fifteen, or rarely twenty grains of quinine per diem for the first two or four days (lessening the dose at once on the access of signs of quininism), were of great service; and I often saw marked improvement from this course in cases in which I had not been able to discover any indication for the use of an anti-periodic. Hence I fell into something of a routine of prescribing quinine in full doses during the first third of typhoid fever; and in those cases presenting no indication of benefit from this medicine, I could not in a single instance see any sign that it did harm. But after the first third of the disease I could discover no benefit from continuing the large doses, but on the contrary thought I got better effect from one or two grains three times a day, with wine, milk punch, beef-tea, and all the adjuvants of a tonic and stimulating treatment. During the spring I saw at the different regimental hospitals, by invitation of the surgeons of several New England nine months' regiments, a great many severe cases of typhoid fever (then quite prevalent in the new regiments here), and although most of them did not exhibit any remission, and hence had not been thought complicated at all with malaria, yet the fact was indisputable that they did better after the introduction into the treatment of full doses of quinine during the first part of the disease; and in cases in which quinine had not been given at first, it often, though not invariably, was of apparent benefit in somewhat smaller doses in the later stages of the disease.

The term "typho-malarial fever" has been adopted into official nomenclature since the commencement of the present war, but seems destined, from its appropriateness to a large class of cases, to become a permanent addition to at least the list of our army diseases.

As I have before remarked, after soldiers have been for some time in the field the character of their diseases becomes modified to a marked degree. The various influences of army life, such as change of diet, sleeping irregularly and on or near the ground, exposure night and day to all varieties of weather, and abrupt alternations of full feeding with light work, and long protracted taxing to the utmost the physical powers upon unsuitable, ill-prepared and scanty food—all these, and many more, are not only agents for the production of abnormal conditions, but also so change the system that it responds quite differently to the ordinary causes of disease. Hence it follows that few of the serious cases of malarial disease one is called upon to treat after six months' service in the army, are either simple, well defined, or exactly described by any of the old terms, as intermittent, remittent, or typhoid, but partake in some degree of the nature of all; and from the previous surroundings of the patient are inclined to rapidly assume a decided typhoid type, and are therefore aptly designated typho-malarial.

The wide range indicated by this term causes almost every variety of camp fever to be registered under it, from cases of no serious moment compounded of a little malarial disease and much exhaustion from fatigue and exposure, to severe cases of typhoid fever, rendered still more grave by the addition of the effects of miasmatic poison and by lack of timely care. Few of these cases present in any part of their course after they enter the hospital any decided intermission or remission, but careful watching will in almost every instance discover a periodical ebb and flow of the fever tide; and the white, thick, pulpy, rounded tongue will dumbly speak of malaria. In such a comprehensive class of cases, the treatment must of course be equally inclusive; the indications in one patient being in decided contrast, in many respects, to those in another. Yet varied as are the cases, two items of treatment may, in my opinion, be set down as being as nearly without exception as any human rule, viz., quinine in full doses during the first stage of the disease, and a tonic, supporting diet all through the course of the illness back to established health and full rations again. Inattention to either of these points will often in a few days, in an apparently mild case, develope the sordes and dry, dark, cracked tongue and lips of a hazardously prostrated condition. Soldiers may, and often do, perform prodigies of strength and endurance while fasting; but when sick they don't bear starving well, but require, instead of slops and gruels, at the earliest possible moment an approximation to their habitual concentrated nourishing food. Indeed, I am getting to believe more and more in the importance of nutritious food in any protracted disease, and feel much less anxiety when my stock of drugs gets low, than when my supply of fresh beef, mutton, chickens, oysters and eggs fails me, as it is prone to do in this Department, in spite of the best laid plans of supply. In fact, it is hardly possible for patients to fare sumptuously every day when rations are commuted at but eighteen cents a day, and eggs, when attainable at all, are three fourths to one dollar a dozen, *milk and water* fifty cents a gallon, and everything else in proportion. I have often fervently hoped that if confined to the value of eighteen cents a day for the board of each soldier, I might at some period of my life have charge of a hospital in some part of the productive North, where one can buy the fruits of the earth without paying such an enormous tax as is levied here to compensate for a lack of thrift and gumption.

Following as a sequence in the track of the foregoing varieties of fevers, comes the least hopeful portion of the most disheartening class of ailments that come under the care of the army surgeon; viz., chronic enteric affections. Although these cases are nominally divided into chronic diarrhœa and chronic dysentery, the serious cases, so far as I have observed, all really become chronic dysentery; the symptoms in the later stages indicating unmistakably what an autopsy always reveals—ulceration of the colon.

Many cases registered as chronic diarrhœa are merely protracted cases of simple diarrhœa kept up by some continuous error of diet, drinking water, or surrounding circumstances. These, on being placed in hospital under proper restrictions as to food, rest and exposure, are usually very tractable. The disease being kept up by a constantly acting cause, without any organic lesion, no sooner is the cause removed than nature returns to health, with but little aid from drugs. One of the most important points in the treatment of this class of cases (which, fortunately, comprises quite a proportion of all admitted), is not to return them to duty too soon. The full strength of the patient by no means returns as soon as the disease is checked, and if he be at once sent into the field, a relapse is almost certain. I have found it good economy for the service in these cases to keep them a couple of weeks after apparent recovery on some light duty about the hospital.

But a large portion of the cases of chronic enteric affections are, as mentioned above, sequelæ of malarial fevers; and in these, as in phthisis, the end of a long course of "getting a little better," with sad frequency, is death. In these patients to a sallow, anæmic, cadaverous look, indicating a general depravation of the secretions, and to a wasted, shrunken appearance, showing a deficiency in the powers of nutrition, is almost sure to be soon added a slight tenderness in the region of the colon, then decided soreness, with more or less tumefaction, and finally dysenteric tenesmus, with sanious and purulent evacuations, and all the signs of ulceration of the lower bowel. The brain and nervous system suffer from imperfect nutrition quite as much as any portion of the patient; and instead of that buoyant courage that of itself is better than any medicine, comes a listless, discouraged, depressed feeling that reacts seriously to the hindrance of recovery.

In the treatment of this class of cases, one has abundant opportunity to run through a long list of remedies, and to get little but dissatisfaction from them all. In no disease, perhaps, is the old adage so applicable, "a new broom sweeps clean"; a new treatment often appearing to work like a charm for a week or so, then losing its effect almost entirely. This fact indicates the propriety of frequently changing the article prescribed to effect the same object. Astringents and opiates must, of course, occupy constantly a prominent place in the treatment; but care is necessary that they are not pushed to the point of retaining too long the vitiated secretions and excretions. A friend in charge during the summer of a large hospital here, thought he got most excellent results from the continued use of strychnine, combined with quinine, opiates and astringents in moderate doses. At his suggestion I tried the same course, but, though I thought I saw much improvement in some cases in restoring tone to the enfeebled intestines, yet I was not as well pleased with strychnine as from his reports I hoped I might be. The mineral acids in many instances gave good results, as well as the muriated tincture of iron. Small doses of iodide of potassium, combined with light opiates, often acted admirably in aiding in the restoration of the natural secretions.

In most of the cases received during the summer, there was more or less scorbutic complication; and in these, the free use of lemons, and a diet composed largely of fresh vegetables, were of great service; the diarrhœa often yielding precisely as the signs of scurvy disappeared.

During the early fall of 1862, I had a large number of serious cases of chronic diarrhœa, many of them exhibiting symptoms of scurvy. The only vegetables within my reach, in any considerable amount, were green oranges; and, as they were very grateful and palatable to the taste of the patients, I bought with my hospital fund large quantities of the fruit, and soon became convinced that few articles of medicine or food did as much good. From what I have observed during the nearly two years I have spent in this department, I judge that no one thing is more conducive to health in this climate, especially during the summer season, than a constant use of fresh fruit and vegetables of good quality and in moderate quantity.

In the treatment from May to October, of serious cases of disease of the bowels, there is, however, no course of medication or diet that will take the place, especially to northern and eastern men, of a change of climate. The debilitating effects of the long sweltering heat more than counterbalance the influence of nutriments, tonics, or stimulants; while the miasmatic poison is ever present to develope new or perpetuate old disease. I have been happily surprised on sending home feeble, cadaverous-looking patients in July or August, to see them return in October plump and hearty; and I have been also sadly disappointed that many a mild case in June has proved serious in July, and fatal in August or September, in spite of every effort within my power.

It has seemed to me that it would be good economy for Government to have a Hospital near the northern sea coast set apart for the especial purpose of receiving for treatment patients from this Department—the men to be transferred without the tedious formality of procuring a furlough. Not only does it often happen that so much time elapses before furlough papers pass through the prescribed mill and get back to the soldier, that he is beyond the chance of benefit by the change, but very many are in need of the tonic northern air who have no homes, or uncomfortable ones, and are not pecuniarily able to provide such attendance and conveniences as they require, to say nothing of the claim they have on the United States for medical care during illness. With such a Hospital established at some accessible and healthy point, the patients to be transferred on recommendation of the Medical Director, or a Board of Examination, and a vessel properly fitted up constantly employed in transportation back and forth, I am confident very many lives might be saved to the service and to their friends. I am quite sure, too, that during the past season many soldiers were discharged from the service, who, by a two months' transfer to a Hospital in such a locality, followed perhaps by a month's furlough to complete convalescence, would now be fit for active duty. The sea voyage home and back, of itself, in a comfortably prepared Hospital Ship, would cure many cases that here go down under the best care. The need for a transfer to the North is felt equally in treating wounds, as disease; many proving fatal here during the long debilitating hot season, that in New England would make good recoveries.

Amongst the pleasures I anticipate in a permanent return one of these days to New England—that bleak, sterile country that, though spoken evil against, every wandering son loves and longs for more and more for every day's absence—I reckon as not least the professional relief in practising the healing art where malaria is not inhaled at every breath, where nature is not always antagonistic to the physician, and where a vigorous, rapid, and complete convalescence is not an impossibility.

In concluding this letter, I am sure, my dear sir, I should beg pardon for at least two points connected with it; viz., first, for writing it at all—and second, for making it so long; for both of which offences I hope you will "have me excused." Nearly everything I have written I am aware is the commonest kind of commonplace—but so is nearly all of one's life—and I have written as I have seen and done.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Nov. 9th.—*Injection of a Nœvus with Perchloride of Iron.*—Dr. Hodges said he had lately treated a case of nævus, on the side of the neck of a child, by injection with equal parts of perchloride of iron and water. The disease, which had been rapidly growing, was of the size and shape of an almond-meat. The effect of the operation was to turn the disease immediately quite black, and in a week or ten days it dried up and fell off, leaving no scar, and without having caused the least trouble. Only two or three drops of the solution were used. Dr. H. would not have thought of mentioning the case, had he not since read in a London journal the report of a case in which this mode of operating in a nævus without large veins, situated at the side of the nose, in a child of quite small dimensions, was instantly followed by the death of the patient. Dr. H. had often treated varicose veins in this way, without the occurrence of any unpleasant symptoms except in one instance, in which it was followed by inflammation and a slough.

Nov. 23d.—*Existence of the Hymen at the time of Labor.*—Dr. C. E. Ware said he had lately attended a young woman in her first labor. On attempting to make a vaginal examination, he found the entrance to the vagina almost completely closed by the hymen, so that he could only introduce the tip of his finger. As the membrane became distended by the pressure of the head, Dr. W. tore it with his finger, and delivery was speedily accomplished.

DEC. 14th.—*Cancer of the Stomach.*—Dr. JACKSON showed the specimen, which was sent to him by Dr. Ruschenberger, Surgeon of the Charlestown Navy Yard. The whole circumference of the stomach, to the extent of about two inches from the pylorus, was completely disorganized. It was thickened, smoothly ulcerated upon the surface, but sloughy to the extent of half an inch or more. The disease was quite defined, and the structure, though rather firm, resembled encephaloid rather than scirrhus, there being no trace of the natural tissues. Otherwise the organ was healthy. The head of the pancreas was enlarged to the size of an English walnut, indurated, whitish, opaque and disorganized.

The patient was an Acting Master in the U. S. Navy, 49 years old, who had not been much at sea; habitually abstemious, drinking water chiefly, and not accustomed to tobacco. About December, 1862, he began to feel weakness in the knees and palpitation on ascending stairs. These symptoms increased, and he became speechless on reaching the top of a flight of stairs. He also had constipation, flatulence, acid eructations and other dyspeptic symptoms, which were attributed to fatigue and worry of mind. He first came under treatment May 14th, 1863. In July he began to have pain in the epigastrium, extending to the spine, with tenderness at the scrobiculus cordis, limited to a region about two inches in diameter. The pain was increased by the recumbent position. The complexion had a straw-colored hue. Vomiting began Oct. 5th, and recurred daily, or every second or third day. Blood was observed in the ejected matters, Oct. 18th. A portion of the matters vomited on the 28th was filtered through paper; nucleated cells, a few blood globules and some epithelial matters were observed in the filtrate. Between the 8th and 22d of November there was no vomiting. The patient slowly and regularly emaciated, and lost muscular power from the beginning to the close. He died Nov. 30th. During a part of the time he was under the care of Dr. Teulon, of Newton.

JAN. 11th, 1864.—*Tracheotomy in Croup.*—Dr. CABOT had lately operated in two cases of croup. One patient recovered, the other died. The first was a girl, 6 years old. When Dr. C. first saw her she was greatly exhausted, and livid. He advised an immediate operation. The parents refused at first, but consented some hours later. The child was removed to the hospital and the operation was done, but it died in fourteen hours.

The other patient was a boy, 15 months old. There was lymph in the throat, the pulse was intermittent, the patient gasping, and the case looked very unpromising. The trachea was opened; membrane was expelled at the time, and subsequently. The child immediately improved, and eventually recovered; the tube was removed in a week. The child had not been weaned, and nursed throughout the whole.

Dr. CLARK said he operated, last week, on a little girl, 3 years old, who had been sick with croup three or four days. Immediate relief followed, but the child died suddenly the next day, probably from obstruction in the tube. Dr. Clark said he had also operated lately on a patient of Dr. Hooker, of East Cambridge, a boy, 5 years old. The patient recovered; the tube was removed in five days.

Jan. 25th.—*Encephaloid Tumor of the Eyeball.*—Dr. **Bethune** showed the specimen. The patient, a man 29 years old, entered the Eye and Ear Infirmary for trouble in the left eye, which began six years ago. For the last year he had been blind of that eye, and had occasionally severe paroxysms of pain. The conjunctiva was thickened and reddened, and a fungous growth projected from between the lids. The eye was removed, and presented no enlargement. The cornea appeared atrophied, and the anterior chamber was nearly obliterated. The internal tissues, wholly disorganized, were transformed into a dark brown, pasty, homogeneous mass, which presented all the gross and microscopical appearances of encephaloid cancer. The sclerotic seemed healthy. Dr. Bethune remarked that the great slowness of the growth, and the fact that the disease was entirely confined to the internal structures, were so far favorable to a permanent cure. This form of cancer was, in his experience, very rare in the eye—melanosis being the most common variety.

Jan. 25th.—*Abscess of the Liver.*—Dr. **Cheever** reported the case. The specimen was found in a dissecting-room subject, but the body was traced to one of the public institutions, from which a history of the case was obtained. The patient was a Frenchman, a sailor by occupation, who had been sick since June with diarrhœa, accompanied at times with bloody stools. He entered the Alms House Oct. 15th, and died Jan. 2d. He had every day a violent and profuse perspiration, but no chills were ever noticed. He had no jaundice. There was pain referred to the umbilical region. At one time the urine was very scanty. He grew weaker and emaciated daily until his death. Abscess of the liver was not suspected, but the case was supposed to be typhoid. On examination, an abscess was found in the liver, containing a pint of pus. There was no peritonitis.

Dr. **Jackson** remarked on the accurate definition of the abscess. The rest of the liver was perfectly healthy. The pus was extraordinarily thick and viscid, seeming almost solid. The walls of the abscess were less than a line in thickness. The condition of the blood-vessels was thoroughly examined, and found to be perfectly normal.

Jan. 25th.—*Cataracts, with unusual Toughness of the Capsules.*—Dr. **Williams** said he had lately operated for cataract on a man 50 years old, and his daughter, aged 6, the latter never having seen. In the case of the child, the cataracts were fluid, and the contents of the capsules escaped when they were punctured. The father had lost his sight by some previous disease, and regained it, which probably caused softening of the tissues of the eyes, as there was some escape of vitreous humor when the cornea was incised. The capsule could not be incised by ordinary efforts, owing to its toughness. Dr. W. then performed iridectomy, and, by means of an instrument specially devised for the purpose, he drew both lens and capsule from the eye. The same operation was then done on the other eye.

Excellent results were obtained in the eyes of both the patients.

Jan. 25th.—*Scirrhus of the Male Breast.*—Dr. H. J. **Bigelow** exhibited a specimen of this disease, this being the third or fourth case that he had met with in his practice. The patient was a gentleman 69 years of age, and the disease had existed for four or five years;

the tumor having doubled its size during the last year, and being, at the time of its removal, half as large as a horse-chestnut. Microscopically and to the naked eye the specimen was a typical one.

Jan. 25th.—*Polypus of the Nose.*—Dr. Bigelow exhibited the specimen. It was of the kind commonly called gelatinous, but it was infiltrated with lymph as well as serum, and in size it almost equalled a horse-chestnut. The patient, a mechanic, about 28 years of age, applied at the Hospital as an out-patient. Both nostrils had been obstructed for less than a year, and a small polypus was seen upon the left side. The forceps were very carefully placed so as to embrace the supposed neck of the larger mass; and, some thirty unsuccessful attempts having been made to extract it, the operation was abandoned. Dr. B. stated to the class that there was evidently a large polypus in the nostril, but that he could not explain the result of the operation. The man then went to the back of the room to wash his face, when the tumor descended into the throat, was hawked up, and he at once came forward with it in his hand. The small anterior polypus that appeared in the nostril is seen connected with the principal mass. The right nostril, Dr. B. remarked, was probably obstructed by a deviation of the septum. The polypus had doubtless been detached at first, but was too large to be drawn through the anterior nares.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, FEBRUARY 18, 1864.

City Physician's Report.—We have read with much interest the annual report of the City Physician, Dr. J. S. Jones, for 1864. Few of us probably are aware of the extent and importance of the labors dependent upon a conscientious performance of the duties of this office. Attendance upon the Jail, City Prison, Temporary Home, and the various police stations is imposed by city ordinances, as well as the examination of candidates for the police force and of persons dying without the attendance of a physician, but a far wider field of usefulness is open to an officer disposed to turn the influence he should possess with the city government to its best account. Matters of the highest importance in a sanitary point of view are neglected from year to year or left to the unadvised discretion of a non-professional department of Internal Health, which might easily be remedied by our efficient police force under the direction and control of an energetic medical man. City officials are too apt to be guided by the letter of the law instead of the necessities of the case, and to excuse any half-way measures in a good cause by the plea of want of authority. For our part we should prefer an occasional overstepping the bounds of written statutes in the way of reform, and more frequent summary action in accordance with the promptings of common sense to the constant appeal to the opinion of the City Solicitor, as is now too often the course in emergency.

We make these remarks not at all in the spirit of reflection upon the retiring medical officer of the city, but with the hope that increased discretionary power may be placed in the hands of his successor, and that a body of policemen may be always at his disposal to investigate the cause of a bad odor, to report the sale of diseased meat, to enforce proper drainage, or to prevent the crowding of tenements and the spread of infectious diseases. He should, in fact, be the active advising physician of those entrusted with the administration of the city, and his counsels should be sought and obeyed as promptly as are those of the family physician in the household. We are pleased to notice in the report a manifestation of this praiseworthy spirit by the municipal government in connection with certain cases of smallpox, which threatened to burst beyond control during the past year. There can be no doubt that the wise precautionary measures adopted at that time by the City Physician prevented an epidemic which might have been as wide-spread and fatal in its character as that of 1859 and 1860. What these precautions were, and how alarming is the amount of material only awaiting the spark to blaze into a fearful pestilence thus discovered in our midst, may be seen by the following extract:—

> "In September, fourteen cases of smallpox were reported at one time in an unhealthy locality. Tenement buildings, in which eighty families resided, covered a small area in close proximity to the house in which the disease first appeared.
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> "These cases were in a family of emigrants who had arrived from Liverpool at New York, a short time previously; the vessel in which they came had the disease on board. Other cases were reported in wards one, two, three, four, and five.
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> "With the approval of his Honor the Mayor, and the co-operation of the Committee of Internal Health, officers were detailed from the Police Department by the Chief of Police, and were placed at the disposal of the City Physician. Twenty-nine hundred and forty families were visited in wards one, three, four, and five. Eleven hundred and ninety-one persons were found unprotected by vaccination; a large part of this number were vaccinated at the office of the City Physician. The sick in some cases were removed to hospitals. In ward two, thirty-one hundred and twenty families were visited. Eight hundred and forty-six persons not vaccinated were found."

During the last epidemic, our local sanitary association endeavored to obtain from the State Legislature more stringent regulations by which the increasing prevalence of this disease amongst us might be checked, but the subject was referred to the next session, at which time the temporary fears of the community had subsided, and the bill, having been unwisely attached to one upon State registration, was with this lost. Its fate only illustrates the necessity of seeking protection from future trouble in decisive city ordinances, and by conferring upon the city physician absolute discretionary powers in relation to vaccination, not only during the prevalence of an epidemic but at all times.

MATERIALS OF WHICH THE SUN IS MADE.—Of all the results which science has produced within the last few years, none has been more unexpected than that by which we are enabled to test the materials of which the sun is made, and prove their identity, in part at least, with those of our planet. The spectrum experiments of Bunsen and Kirchhoff have not only shown all this, but they have also corroborated previous conjectures as to the luminous envelope of the sun. I have still to advert to Mr. Nasmyth's remarkable discovery, that the bright surface of the sun is composed of an aggregation of apparently solid forms, shaped like willow-leaves or some well-known forms of Diatomaceæ, and interlacing one another in every direction. The forms are so regular in size and shape as to have led to a suggestion from one of our profoundest philosophers of their being organisms, possibly even partaking of the nature of life, but, at all events, closely connected with the heating and vivifying influences of the sun. These mysterious objects, which, since Mr. Nasmyth discovered them, have been seen by other observers as well, are computed to be each not less than 1,000 miles in length and about 100 miles in breadth. The enormous chasms in the sun's photosphere, to which we apply the diminutive term " spots," exhibit the extremities of those leaf-like bodies pointing inwards, and fringing the sides of the cavern far down into the abyss. Sometimes they form a sort of rope or bridge across the chasm, and appear to adhere to one another by lateral attraction. I can imagine nothing more deserving the scrutiny of observers than these extraordinary forms. The sympathy also which appears to exist between forces operating in the sun and magnetic forces belonging to the earth merits a continuance of that close attention which it has already received from the British Association, and of labors such as General Sabine has with so much ability and effect devoted to the elucidation of the subject. I may here notice that most remarkable phenomenon which was seen by independent observers at two different places on the 1st of September, 1859. A sudden outburst of light, far exceeding the brightness of the sun's surface, was seen to take place, and sweep like a drifting cloud over a portion of the solar face. This was attended with magnetic disturbances of unusual intensity and with exhibitions of aurora of extraordinary brilliancy. The identical instant at which the effusion of light was observed was recorded by an abrupt and strongly-marked deflection in the self-registering instruments at Kew. The phenomenon as seen was probably only part of what actually took place, for the magnetic storm in the midst of which it occurred commenced before and continued after the event. If conjecture be allowable in such a case, we may suppose that this remarkable event had some connection with the means by which the sun's heat is renovated. It is a reasonable supposition that the sun was at that time in the act of receiving a more than usual accession of new energy ; and the theory which assigns the maintenance of its power to cosmical matter plunging into it with that prodigious velocity which gravitation would impress upon it, as it approached to actual contact with the solar orb, would afford an explanation of this sudden exhibition of intensified light in harmony with the knowledge we have now attained that arrested motion is represented by equivalent heat. Telescopic observations will probably add new facts to guide our judgment on this subject, and, taken in connection with observations on terrestrial magnetism, may enlarge and correct our views respecting the nature of heat, light and electricity. Much as we have yet to learn respecting these agencies, we know sufficient to infer that they cannot be transmitted from the sun to the earth except by communication from particle to particle of intervening matter. Not that I speak of particles in the sense of the atomist. Whatever our views may be of the nature of particles, we must conceive them as centres invested with surrounding forces. We have no evidence, either from our senses or otherwise, of these centres being occupied by solid cores of indivisible incompressible matter essentially distinct from force. Dr. Young has shown that even in so dense a body as water, these nuclei, if they exist at all, must be so small in relation to the intervening spaces, that 100 men distributed at equal distances over the whole surface of England would represent their relative magnitude and distance. What, then, must be these relative dimensions in highly rarefied matter? But why encumber our conceptions of material forces by this unnecessary imagining of a central molecule? If we retain the forces and reject the molecule, we shall still have every property we can recognize in matter by the use of our senses or by the aid of our reason. Viewed in this light, matter is not merely a thing subject to force, but is itself composed and constituted of force.—SIR WM. ARMSTRONG *at Meeting of British Association.*

NEW CITY HOSPITAL.—We are pleased to see that the Trustees of the City Hospital have elected Dr. John Homans to fill the place of senior physician made vacant by the death of Dr. J. C. Dalton. The city may congratulate itself upon acquiring the services of a physician so mature in wisdom and so respected and beloved by all.

WATER AS A SANITARY AGENT.—General Morin, who has much occupied himself with improvements in the ventilation of public buildings, in a note addressed to the Academy of Sciences, in Paris, treats of what he terms the "hygrometricity" of confined places. Much struck with the importance which the English engineers and authors attach to the imparting to the air employed for ventilation, whether heated or not, a certain amount of moisture, he was induced to investigate whether the salubrity of such air might not be due in some measure to the development of a certain amount of electricity by the passage of the air through the vaporized water (as in the case with regard to dew and rain during storms), giving rise to the production of free oxygen. If this or some analogous modification can be shown to take place, we have in our hands a simple, efficacious, and economical means of purifying the air of inhabited places, especially in summer. Air containing free oxygen, possesses in a high degree the property of burning certain miasmata and emanations from bodies in a state of putrefaction. General Morin accordingly instituted some experiments, in order to ascertain whether the dispersion or solution of a certain quantity of sprayed water in the air sensibly modified its electrical condition. The results show the extrication of free oxygen, and the subsequent or concurrent formation of an acid. As both the oxygen and the acid, probably a nitrous compound, possess the property of destroying putrefactive emanations, their presence sufficiently proves that the vaporization of water in the air, besides the increase of moisture and depression of temperature which it gives rise to, may exert an action on the animal economy, and upon the air of habitations, deserving the attention of sanitarians.

The *Sanitary Reporter*, from which we take the above, says that the Houses of Parliament, in London, have been for some years ventilated by means of moist air, produced by a spray jet. At the end of the delivery water-pipe is affixed a movable nozzle, perforated with minute holes. The force of the water in passing through the orifices, causes the nozzle to revolve after the manner of the Catharine wheel used in fireworks, and the water is thus distributed throughout the surrounding atmosphere, producing a kind of Scotch mist.—*American Gas Light Journal.*

CITY PHYSICIAN.—The announcement of the election of Dr. William Read as City Physician will be received with much satisfaction by all our readers. The City Government could have chosen no one more eminently fitted to perform the duties of this office.

ECONOMICAL MANAGEMENT OF THE U. S. SANITARY COMMISSION.—Mr. J. E. Williams, after special inquiries, communicates the following statement to the *N. Y. Evening Post.* We may add to it, that if any gentleman in any office in the country renders services in comparison with which his pay is a pittance, it is the Secretary referred to:

Every executive officer of the Commission gives his services gratuitously; not one receives a dollar compensation, except the Western Secretary, whose salary is $3,000 per annum. There are about two hundred paid employees, who receive an average amount less than forty-five dollars per month. The whole expenses attending the distribution of articles amount to a little over two per cent. That is to say: One hundred thousand dollars' worth of supplies are delivered to hospitals and to the army at different posts, for something less than two thousand five hundred dollars expenses.

RUSH MEDICAL COLLEGE, CHICAGO.—The Commencement exercises of the 21st annual course of lectures took place on the 27th ult., when the degree of Doctor of Medicine was conferred on 79 gentlemen. Prof. Brainard, President of the Faculty, conferred the degrees and delivered a valedictory address.

SOUTHERN OHIO LUNATIC ASYLUM.—From the Ninth Annual Report, we learn that there were remaining in the Asylum Nov. 1, 1862, 161 patients; admitted during the year ending Oct. 31st, 1863, 91; number under treatment during the year, 252. Discharged, as recovered, 59; improved, 9; unimproved, 7; died, 14. Remaining in the Asylum Nov. 1st, 1863, 163. Since the Institution was opened, September 1st, 1855, 996 patients have been admitted. Of these, 512 have recovered, a proportion of 51·46 per cent. upon the admissions, and 61·47 per cent. calculated upon the whole number of discharges.

WISCONSIN STATE HOSPITAL FOR THE INSANE.—Number of patients remaining Sept. 30, 1862, 131; admitted during the year, 123; total, 254. Discharged during the year, 66; remaining, Sept. 30th, 1863, 188. Of the 66 discharged, there have recovered, 37; improved, 16; not improved, 4; died, 9. Since the opening of the hospital, 357 patients have been admitted. Dr. J. P. Clement, Medical Superintendent, who has been connected with the Institution since its first opening, has tendered his resignation.

Wills Hospital.—Dr. S. Littell, who has served this hospital so faithfully and ably as one of its surgeons for upwards of a quarter of a century, has resigned; Dr. Hunt, recently elected one of the surgeons to the Pennsylvania Hospital, has also resigned from Wills, and a third vacancy in the surgical staff has been created by the absence of Dr. Harlan, Surgeon U. S. V. At the meeting of the board of managers on the 3d January, these vacancies were filled by the election of Drs. D. H. Agnew, A. D. Hall, and R. J. Levis.—*Med. News and Library.*

Stephen G. Risley, M.D., of Rockville, Ct., has been appointed examining surgeon, in accordance with the provisions of the 8th section of the act entitled "An Act granting Pensions."

Dr. C. V. R. Creed, of New Haven, Ct., has received the appointment of surgeon of the 29th (colored) regiment.

Drs. R. B. Cole and H. Gibbons are hereafter to be the Editors of the *San Francisco Medical Press*.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, February 13th, 1864.

DEATHS.

	Males.	*Females.*	*Total*
Deaths during the week - - - - - - - -	52	52	104
Ave. mortality of corresponding weeks for ten years, 1853—1863,	36.1	38.8	74.9
Average corrected to increased population - - - -	00	00	82.318
Death of persons above 90 - - - - - - - -	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
19	3	11	3	1	1	2	4

Books and Pamphlets Received.—A Treatise on Human Physiology, designed for the use of Students and Practitioners of Medicine. By John C. Dalton, Jr., M.D.—Proceedings of the American Pharmaceutical Association at its Eleventh Annual Meeting, held in Baltimore, Md., Sept. 10th, 1863.—Fifth Report concerning the Aid and Comfort given by the Sanitary Commission to Sick and Invalid Soldiers.—Ninth Annual Report of the Board of Trustees and Officers of the Southern Ohio Lunatic Asylum, for the year 1863.—Eleventh Annual Meeting, for the Years 1861, '62 and '63, of the Illinois State Medical Society, held at Jacksonville, May 5th, 1863.—Annual Report of the Trustees of the Hospital for the Insane of the State of Wisconsin, for the Fiscal Year ending Sept. 30th, 1863.

Died,—In Ellington, Ct., Jan. 26th, of dropsical consumption, Dr. Joseph Partridge, aged 52, formerly of Savoy, Mass.—In Cincinnati, Ohio, L. M. Lawson, M.D., late Prof. of Theory and Practice in the Medical College of Ohio, aged 51. Dr. L. established the *Western Lancet* in 1842, and was connected with it editorially till 1854. He was at different times a professor in several of the medical colleges of the South-west, and is favorably known as the author of a work on Phthisis Pulmonalis.—Drowned at sea, Dec. 2d, Dr. C. H. Pearson, Surgeon of the ocean steam packet Ceres.

Deaths in Boston for the week ending Saturday noon, Feb. 13th, 104. Males, 52—Females, 52.—Accident, 3—apoplexy, 1—disease of the bowels, 1—inflammation of the bowels, 2—congestion of the brain, 2—disease of the brain, 2—inflammation of the brain, 2—bronchitis, 6—burns, 1—cancer, 1—canker, 1—consumption, 19—convulsions, 5—croup, 3—diarrhœa, 3—diphtheria, 4—dropsy, 4—dropsy of the brain, 2—dysentery, 1—exposure, 1—intermittent fever, 1—scarlet fever, 11—typhoid fever, 2—hæmorrhage, 1—disease of the heart, 3—intemperance, 1—jaundice, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 3—old age, 2—premature birth, 3—puerperal disease, 1—smallpox, 1—unknown, 3—disease of the uterus, 1—whooping cough, 1.

Under 5 years of age, 51—between 5 and 20 years, 11—between 20 and 40 years, 22—between 40 and 60 years, 10—above 60 years, 10. Born in the United States, 78—Ireland, 18—other places, 8.

THE

BOSTON MEICAL AND SURGICAL JOURNAL.

Vol. Lxx. Thursday, February 25, 1864. No. 4.

CASES ILLUSTRATIVE OF OBSTETRIC DISEASE*

By Horatio Robinson Storer, M.D., of Boston, Surgeon to the Pleasant Street Hospital for Women.

[Communicated for the Boston Medical and Surgical Journal.]

Case I.—*Abscess confined to the Uterine Parietes.*—Mrs.——æt. 25, had always had dysmenorrhœa, and suffered considerably during coitus. About the last of September she was delivered of a living child, the labor not being unnatural. A few days subsequently there were symptons of pneumonia, cough, &c., and she was treated for some three weeks as purely a case of pulmonary disease. She then passed under the charge of another physician. For the four weeks ensuing there were constant chills, two other physicians seeing her from time to time in consultation; the formation of matter seeming at this time to have been suspected, but it was not localized. Four days previous to her death she passed into the hands of Dr. McIntire, of Concord, N. H., from whom I subsequently received the pathological specimen illustrative of the case, which is now, I believe, in the College Museum.

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* The above cases were reported at the January meeting of the Suffolk District Medical Society. They will imitate a series of illustrations of the various diseases of women, selected from many hundreds that have now fallen under my observation. In this connection, and as forming a prior series bearing upon the same end, I may be permitted to recall to the reader's recollection some of the other cases of obstetric interest that I have already reported, chiefly to the same Society, at different times in past years.

Cases I. and II.—Nymphomania; removal in one of the instances, of foreign bodies from the bladder. Am. Jour. of the Med. Sciences, Oct., 1856, pp. 78-84; this Journal, Oct., 1856, p. 210.

III. and IV.—Application of Potassa Fusa to the interior of the Uterus. Boston Med. and Surg. Journal, Oct., 1858, p. 210, and July, 1859, p. 512.

V.—Fibrous Enlargement of the Uterine Wall. Operation. Loc. cit., Sept., 1856, p. 101.

VI.—Intra-uterine Polypus. Operation. Loc. cit., July, 1856, p. 500.

VII.—and VIII.—Cupping the interior of the Uterus for Amenorrhœa. Phila. Journal, Jan., 1858, p. 117.

IX. and X.—Simulations of Abortion. Loc. cit., April, 1859, p. 314.

XI.—Puerperal Mania. Boston Med. and Surg. Journal, Aug., 1856, p. 20.

XII. and XIII.—Placental Disease. Loc. cit., March and July, 1856, pp. 120, 437.

XIV.—Retained Placenta; Injection of Water through Umbilical Vein. Loc. cit., March, 1856, p. 169.

XV.—Placenta Prævia, with Twins. Loc. cit., Nov., 1856, p. 347.

XVI.—Puerperal Fever prevented by Muriate of Iron. Loc. cit., Feb., 1856, p. 81.

XVII.—Induction of Premature Labor by a new process, dilatation from above. Phila. Journal, July, 1859, p. 111.

XVIII.—Rigidity of the Os Uteri during Labor. The first instance reported in America, of relief by antimonial enema. Boston Med. and Surg. Journal, Feb., 1856, p. 38.

XIX.—Toothache of Pregnancy. The first instance anywhere reported, of relief by submucous injection. Loc. cit., Oct., 1859, p. 189.

Upon examination by Dr. M., a bed-sore was found over the sacrum, the strictly superficial character of which was subsequently confirmed at the autopsy. By the vagina, which was extremely sensitive, the os uteri was found normal, slightly open, and without ulceration or abrasion; the cervix enlarged, tender upon pressure, soft and with obscure fluctuation. From the permeability of its canal, a localized uterine abscess was diagnosticated. There had been present some slight dysuria, but no sudden purulent discharge from the vagina. The patient was hectic, and as it was of course very difficult to be positively certain as to the extent to which the pus had burrowed in the uterine tissue, no operation was proposed or performed. In a similar case, though so very unlikely to be met with, I should be inclined to advise the use of the exploring needle and free incision; although I am aware that Churchill and others aver that the artificial evacuation of such an abscess may be attended by danger and death.

At the autopsy, a self-limited abscess, holding some two or three drachms, was discovered in the posterior wall of the cervix, the remainder of the uterus and the surrounding tissues being perfectly healthy and without sign of peritonic or other general inflammation; there was no trace present of pelvic cellulitis, nor had there at any time been symptoms of metritis. The abscess had never made for itself an outlet, either into the vagina or cavity of the cervix, and Dr. McIntire, instead of freely incising and defacing the specimen, very wisely contented himself with merely slitting up the cervix anteriorly and making a small puncture into the wall of the sac, so that the slightest pressure would force the pus to well up through the orifice. In this condition, the diagnosis having been fully confirmed, the specimen was sent to me. I placed it in Dr. Jackson's hands, and some of the gentlemen present may have already enjoyed an opportunity of examining it.

I have reported this case for a two-fold reason: that it is an excellent instance of successful diagnosis, dependent upon an intelligent and educated touch, which I consider indispensable to the study of the diseases of women; and because examples of localized abscess in the uterine walls are of extremely infrequent occurrence. Most of those that have been put upon record resolve themselves, upon careful scrutiny, into the sequelæ of inflammations that have occurred entirely without the uterus or within its cavity—the result of endo- or peri-mitris, of pelvic cellulitis or of perpetural peronitis. In the instance now reported there were none of these elements present. Colombat, indeed, in his excellent treatise, undertakes to account for the rarity of localized parietal abscess on the ground that the dense and compact structure of the womb can necessarily yield but slightly to the formation of pus.* A single instance is alluded to by Churchill,† where the specimen, in the possession of Mr. Howship, exhibited in its walls an abscess, containing an ounce of purulent fluid. This, it will be perceived, was almost an exact counterpart to the one now described.

In the rare instances where a patient supposed to be thus affected has recovered, it is not unlikely that some doubt may exist as to the correctness of the diagnosis.

CASE II.—*Large Caruncle of the Urethra. Removal.*—Rebecca W., aged 22, was sent to the Woman's Hospital in Pleasant St., on the 17th Jan. inst., by Dr. Storer, Senior, her attending physician. The patient is married, has had two children, but has once accidentally miscarried at six months. She was anæmic and feeble and almost broken down by overwork. She had suffered excessively from one of the well-known irritable tumors of the meatus, which had already been removed by ligature, and its base thoroughly cauterized both by nitrate of silver and by caustic potash. As is so often the case, the tumor had returned, and was now of unusual size, being very nearly if not quite as large as an ordinary strawberry. The greater portion of the mass was situated superiorly to the meatus, extending downwards laterally upon both sides, so that the orifice of the urethra was almost entirely surrounded by it.

On 25th inst., I proceeded to operate. The tumor was first seized by a vulsellum and put upon the stretch by an assistant. I then cut it thoroughly away by curved scissors, together with the mucous membrane from which it sprang and for some little distance around it. The wound thus made, which bled freely, was thoroughly cauterized by the hot iron, and the patient to-day, five days subsequently to the operation, is doing well.

The point to which I would here more particularly allude is the necessity, before a permanent cure can be effected, of excision and actual cauterization conjoined; neither of them by itself being generally sufficient to prevent a return of the morbid growth, whereas the two procedures together are almost always effectual. The ecraseur I do not consider as effectual for these cases as the knife. The little mass removed I have desired Dr. Ellis to carefully dissect with the microscope, as there is still some little doubt among obstetricians as to the actual pathological nature of the lesion.

CASE III.—*Local Enlargement of the Vaginal Wall. Operation.*—Catherine C., aged 19, enterered the Woman's Hospital on the 21st of the present month, being sent by Dr. Bowditch. She is unmarried, and has always suffered from extreme dysmenorrhœa, for which, the ordinary medical treatment having failed, she was ordered an intra-uterine galvanic pessary. Upon making the preliminary examination for this, it was found that while the hymen was well developed, the orifice of the vagina behind it was nearly occluded by a fleshy and sessile mass anteriorly, of the size of an almond, which, as well as the parts adjacent, was exquisitely painful to the touch. Upon this I operated yesterday, Jan. 29th. The patient was etherized, the tumor put upon the stretch, and excised by the wire ecraseur. Hæmorrhage was here also abundant, and, as in the last case, was restrained by the actual cautery, which in these cases of morbid growth or enlargement, I prefer to the use of perchloride of iron or of any other styptic, as tending to arrest and prevent a further development. Indeed, the opinion that I expressed at a meeting of this Society some eight years ago, and then illustrated by a very striking case, of the application of the actual cautery to uterine cancer, and its decided advantage for many cases of uterine and vaginal disease over every other application whatever, extended experience in now very many cases has served to strengthen and to prove correct.

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* Diseases and Special Hygiene of Females, p. 231.

† Diseases of Women, Edition of 1859, p. 243.

The mass was here situated immediately below the meatus. At first, upon touching and without a careful examination, it closely simulated the commencement of a vaginal cystocele or prolapse of the anterior vaginal wall. This, however, was at once shown not to be the case by introducing the catcheter and turning its point downward upon the part affected, when it became evident that no pouch existed, and that the enlargement was wholly external to the urethra. The vagina is now since the operation sufficiently patulous to admit the forefinger with ease, and the instrument required for the treatment of the dysmenorrhœa.

Case IV.—*Double Fistula in Ano. Operation.*—Mrs. P., residing upon the Highlands in Roxbury, consulted me for the first time on last Tuesday, the 26th inst. She is a divorcée, having been separated from her husband for criminality upon his part, and has but a single child, some twelve years old. She has at no other time been pregnant. Her general health has been tolerably good, with an exception of certain pelvic symptoms, which are evidently connected with a cervix much hypertrophied. To the left of the anus were two fistulous openings, perhaps an inch and a half apart, each freely admiting an ordinary probe. Each extended high up, well above the internal sphincter, and entered the bowel by an opening readily found by the probe. These two sinuses were entirely distinct from each other up to their very entrance into the bowel, where they finally met. Each was in the habit of almost constantly exhibiting a purulent discharge, not unfrequently with fæcal admixture. The patient had endeavored to close them externally by the use of irritating tents.

In operating, I first slit up the inner sinus, and then opened the second into the track of this incision, of course freely dividing the sphincter, yet doing this but once. The patient is to-day, the 30th, doing well.

It is my impression, from somewhat extended observation of these cases, that double fistulæ, with sinuses entirely distinct from each other though with a common origin, is, with females at least, of comparatively infrequent occurrence. It is probable that the patient's attempt to close the first fistulous opening caused a slight divergence from the track of suppuration, forming the second sinus, and that the first was subsequently again forced open.

CASE V.—*Circumscribed Tumor of the Umbilicus, closely simulating Umbilical Hernia, apparently undescribed by authorities upon the subject, and perhaps new to Abdominal Diagnosis.*—Bridget McN., aged 40, was sent to the Woman's Hospital in the middle of November last by Dr. B. S. Shaw. She had been a patient at the Mass. Gen. Hospital, and her disease had there been very correctly suspected to be of malignant character. I will not enter into all the details of the case, although these, in several repects, are extremely, interesting, inasmuch as they do not bear upon the special point for which I report the case. From the records of the Mass. Gen. Hospital, a full copy of which has been kindly sent to me by Dr. Shaw, it appears that the patient entered that institution on Aug. 14th, with ascites. She was tapped on the 30th of that month, eleven quarts of reddish, rather turbid serum being drawn off. No hepatic tumor was at that time to be discovered.

Shortly after her entrance at Pleasant St., I had occasion to again perform paracentesis, and it was repeated at intervals of a fortnight, some five or six times, until her death, which occurred on the 15th of the present month—upon each occasion two water-pails of bloody serum being removed, and upon each a tumor becoming more and more distinct a little to the right of the epigastrium, until it finally attained a size somewhat larger than a goose's egg. At the autopsy this proved to be the liver, enlarged and with extensive depositions of encephaloid matter, pronounced by Dr. Ellis of cancerous character. The omentum, peritoneal surface and tract of the intestines were studded with carcinomatous deposits, and the uterus and ovaries, though never having given signs of functional or other disturbance, were degenerated into a common mass of disease, their relative limits being almost undistinguishable.

At the umbilicus there had always been noticed, since my first observation of the case, a circumscribed tumor of about the height and size of the last phalanx of the thumb, so entirely suggestive of an ordinary umbilical hernia that the possibility of its being otherwise was never suggested or entertained. The tumor remained of the same character at all times—both before and after tapping, and when the abdomen was distended and when it was empty—and was therefore supposed to be occasioned by old adhesions of some portion of the bowel, with perhaps partial strangulation, dating possibly from childhood; and therefore the absence of acute symptoms, hardly to be expeced under such circumstances, was not considered unusual. At the *post-mortem* examination, however, it proved that there was no loop of intestine in the neighborhood of the umbilicus —that there was not and never had been any hernia at all. The tumor was well defined, localized and entirely circumscribed. Upon incision by Dr. Ellis, it proved to be merely a deposition of softened carcinomatous matter in the substance of the umbilical tissue.

One case alone, at all approximating to this in character, had come to the knowledge of Ballard, that close student of the diseases of the abdomen. In the instance referred to, "the parietal peritoneum being infiltrated with colloid, the umbilicus presented a stretched and flattened appearence,"* an appearence entirely different from that now reported, and giving rise to no such mistaken opinion. Its occurrence, as an element towards clearing up one at least of the very many possible obscurities of abdominal diagnosis, has seemed to me of sufficient importance to deserve being permanently recorded.

Hotel Pelham, January 30th, 1864.

CANCEROUS DISEASE OF THE OVARY.

By Dr. G. Kimball, Lowell, Mass.

[Communicated for the Boston Medical and Surgical Journal.]

In one of the numbers of the Boston Medical and Surgical Journal of last June, I published an account of the removal of an ovarian tumor, which, from several circumstances therein stated, I regarded of more than ordinary interest.

The patient, who was then represented as having been apparently restored to complete and permanent health, I have been since called upon to treat for another and more serious malady, but with a less happy result. About ten months from the date of the operation above referred to, this young lady called upon me for advice in reference to a small tumor she had just noticed in her right side. Upon examination, it proved to be located between the superior anterior spinous process of the ilium and the median line, in size a little larger than a turkey's egg, slightly movable, of fleshy density, with irregular surface, without pain or soreness, and causing no inconvenience whatever.

The patient, as to her general condition, appeared remarkably well, having gained in weight about sixty pounds since my last seeing her, and declaring herself in all respects, save in this new development of disease, perfectly well.

Frequent examinations during the two weeks following, showed rapid increase of disease, accompanied, also, with marked constitutional suffering. The expediency of the extirpation of the tumor was considered, and the operation earnestly insisted upon, but all hope of relief in this direction was soon dispelled by the sudden occurrence of a new and seriously complicating difficulty.

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* Diseases of the Abdomen, p. 144.

After an absence of a few days among her friends in the country, she returned to Lowell, complaining of unusual fulness of the abdomen, also of great loss of strength. An examination showed her statement true as to the fulness; moreover, that the abdomen contained a considerable amount of fluid—probably not less than four or five quarts. The distensiou increased with surprising rapidity, accompanied with difficulty of breathing, diminished strength, feeble and rapid pulse, and great restlessness. It soon became necessary to resort to tapping. The fluid drawn away by this operation was not simply ascitic, as had been previously suspected, but of a character which, in color, might have been taken for so much pure blood. This idea, however, was contradicted by the fact that its quantity was not less than seven quarts. At first, the flow through the puncture was free, but it soon became more or less obstructed, and finally completely blocked by small masses of a brain-like subtance, which I took to be detached portions of the recently formed tumor.

Great relief immediately followed this operation; but it was only for a very short period. She died on the fourth day after tapping, and within four weeks from the time the newly formed disease first appeared.

Post Mortem, twelve hours after death. The fluid in the abdomen was drawn off, as far as possible, through the puncture made a few days previously. Its appearence was the same as that already described—possibly not quite so deeply colored. Upon laying open the abdomen, it was found that the tumor in the right side was unequivocally a diseased ovary; that in its morbid development it had become attached to, and, to some extent, blended with the cicatrix occasioned by the previous operation. It had no pedicle, its point of origin appearing to be merged in the broad ligament. No trace of normal ovarian structure could be made out. The tumor itself was evidently of encephaloid character—soft, and already broken down to some extent, with thick and firm shreds of lymph covering a large portion of its surface. Numerous fragments similar to those observed at the time of tapping (evidently once a part of the original tumor) were also found mingled with the serum and large masses of coagula occupying the lower portion of the pelvic cavity.

Every other organ, both of the abdomen and thorax, appeared perfectly healthy. No trace of tubercular deposit could anywere be seen.

In several points this case is noteworthy. Cancer of the ovary is evidently a disease of rare occurrence. Of at least forty cases within my own experience, where an operation for the removal of the organ has been resorted to, this is the first of the kind I have seen.

It is also deserving of remark, that at the time of the first operation, already alluded to, the remaining ovary was particularly observed, and spoken of as being in a healthy state; so that in view of the healthy and vigorous condition of the patient for nearly nine months afterwards, the cancerous development must have taken place within a very short period, not more than four weeks, probably, before death.

Finally, as regards the tubercular condition of the omentum, and peritoneal lining of the abdominal and pelvic cavities, as noticed in the previous operation, it was now found to have entirely disappeared. In neither of these cavities could the slightest trace of tubercular or other morbid change be found, save in the single organ in question.

CASE OF NEPHRITIC CALCULUS LODGED IN THE RIGHT URETER.

[Read before the Middlesex East District Medical Society, Jan. 20th, 1864, and communicated for the Boston Medical and Surgical Journal.]

By Ephraim Cutter, M.D., of Woburn.

Mrs. Eustis Cummings, 28 years of age, sanguine temperament, expected to be confined with her fifth child Dec. 21st, 1863. She was a small, healthy and symmetrical woman.

Nov. 18th, 1863, she sent for me, supposing that she was in labor. Her pains were intermittent, occurring once in ten or fifteen minutes, and were referred to the right lumbar region. They were not intense. The os uteri was high up, undilated, and evidently unaffected by the pains. The case was considered as a false alarm, and she was left with a few one-grain opium pills to lull off the pains till the full time. She was seen on the 19th, and 21st; she had some pains, but there was no alteration in the condition of the os uteri. Her sufferings were moderate; she was able to move about, but not to leave the room. On the 23d, she sent down, and my father answered the call. He found her easier, examined the os uteri, told her that she was not going to be sick, and left. He was summoned again the same night, and did not find her condition much altered, but staid with her all night to pacify her friends. She complained of pain in the right hypochondrium mostly. At one time it was very severe, and only relieved by the inhalation of chloroform. She took physic, and the bowels were freely opned. It was considered by my father as a spurious case of labor, and the pains connected with the uterus. She continued in this half-way state until Dec. 6th, when she was delivered of a healthy, living, male child, in an easy labor. She continued to do well for seven days, when she was seized again with the old pain. Of course we looked for some other cause, but were unable to distinguish between intussusception and nephritic calculus. The means which had before succeeded were again employed. But the pains increased in severity, and had no intervals of rest. The pulse was regular, the respiration troubled, the face anxious, the bowels tender; there was tossing to and fro.

Having taken two or three grains of solid opium, and a grain of the valerianate of morphia, without relief, she begged for chloroform, which procured the desired relief. My supply was soon exhausted, and I went home to procure more. On consultation with my father, we thought best to administer to her half a grain of the sulphate of morphia, dissolved in f ʒ i. of water, by subcutaneous injection, and to continue the chloroform if necessary. The solution was introduced at the inside of the middle of the right leg, near the tibia. In a few minutes she fell asleep, and continued all night till morning—a space of eight or nine hours—in a comatose condition; pulse normal; respiration four times a minute, deep, jerking, stertorous. The effect of the imperfect oxygenation of the blood became manifest in the leaden hue of the countenance and lividity of the lips, which by morning light were so deathly that I endeavored to conteract the poisonous effect of the medicine. After pouring from the nose of a coffee-pot about two pailsful of ice-water, she opened her eyes and manifested consciousness. But she soon relasped into the comatose condition, only to be roused by the cold douche. She was shaken, and marched about the apartment, and about noon fully came out of the influence of the medicine and appeared quite comfortable. About 2, A.M., of the next day she was seized with pain in the chest, oppression of breathing and general prostration, which continued until death, at about noon.

At the autopsy, made the next day, the lungs were found engorged with blood, the heart filled with clots on both sides; the right kidney was evidently twice the size of the left; the right ureter was enlarged, contorted and distended; at the kidney it was nearly three quarters of an inch in diameter, and tapered down to the normal size at the bladder. About an inch from the bladder a calculus was found impacted in the ureter. This was in two portions, both together weighing 7½ grains. The upper part of the kidneys was invaded by an abscess of the size of a hen's egg. The pelvis of the kidney was distended with urine and pus. There was some fatty degeneration of the kidney. Elswhere the appearances were normal.

P. S.—Her first experience of pain was during the previous summer. The dose of the sulphate of morphia may appear large. My father, a short time before, gave two grains of the same salt by separate injections, during the course of two hours, without perceptible effect.

INDIANS OF SAN DIEGO COUNTY, CALIFORNIA.

By Acting Assistant Surgeon D. B. Hoffman, U.S.A.

The Indians which inhabit San Diego County formerly evidently belonged to one tribe. The genuine name of that tribe, when the whites first visited this coast, was "Los Cayotes," and they recognized Juan Antonio, at least so says their history, as their chief. He then resided in the mountains north of Warner's Rancho, at a place called by them "Cayotes." This old chief's family still resides there, and one of his sons is the acknowledged chief of the tribe yet, bearing the same name. It is said, by the early Spanish writers, that the name of this tribe comes from the fact that these Indians, when first discovered, lived mostly in caves or burrows under ground, like the animal from which they take their name; and I am told that, in the wild mountains, they still live in the same manner. This tribe, at the time of which I write, was probably much more numerous than at present. They scarcely number now, all told, four thousand. The Old Missions, established here during the latter part of the last century by the Catholic Missionaries, attracted many of them away from thier old haunts and hunting grounds. When once initiated at a Mission, as a neophyte and laborer, the influence of that, to the uneducated mind, attractive religion, and the easy mode of life which they led, wholly weaned them from their forest homes. The consequence was, that the once large tribe acknowledging allegiance to one chief, was divided and broken up into many small tribes. Wherever there was a Pueblo or Mission, there would be found one of the small tribes located in the vicinity, in what they called *rancheria*. When once settled in this manner, they appear to have renounced all allegiance to their old principal chief, as they chose a chief for themselves, who resided amongst them. But he, as a general thing, had little to do in their government; perhaps, now and then, they would apply to him, but oftener they would go to the civil authority or the priest of the Mission with their complaints, and for redress of their wrongs. Thus they became a disorganized and miserable people, who were slowly allured from one step to another downwards, until quietly subdued by the meanest of motives—mercenary gain—into beasts of burden, "hewers of wood and drawers of water"; for they were made more literally slaves by the sycophantic priests who once "lorded" it over this country, than the most abject African negro that was ever heard of. Now and then, during this period, some of the more vigorous and active chiefs, ambitious to regenerate their race and retrieve it from the terrible thraldom into which it had been merged by superior but more brutal minds, would essay a revolt or revolution, on a small scale; but Spanish muskets and bayonets easily and quickly quelled them.

After the days of the Missions came another evil, greatly to the detriment of the poor Indian, and which well nigh exterminated them. This evil was the settlement of the country, over which they were used to roam without restraint, by the white man. With the advent of this predominant race came the precursor of the dissolution of the red children of the forest, in the shape of "fire-water," and those low, revolting diseases, known only to the low, dirty dregs of society—

rakes, harlots and libertines. At the present time there are but few of them who are not either drunkards, or diseased in such a way that life is but a curse to them. Those that are still living about the towns and missions have assumed civilized habits to such an extent that there is nothing interesting or peculiar about them. Those living in their old haunts, in a still semi-savage state, have many curious and singular customs, habits and traditional legends. Their habits of life are all very simple. They live in villages, often numbering many wigwams or huts. These are generally built by driving long poles in the ground, and bending them over, so as to form an arch; these are then thatched with straw all over, except a narrow hole in one end, which serves the purpose of a door. These villages are usually found near some stream, where there is a sufficient extent of good tillable land, for garden, agricultural or grazing purposes. They generally have a few head of horses, cattle and sheep, and frequently cultivate large fields of grain and fruit. Still they are somewhat nomadic in their habits, spending the summer in the mountains, and the winter on the coast. They also have a custom of coming down on the coast every year, at a ccertain time, for the purpose of taking their year's supply of fish. Instinct or experience has taught them that, at a certain season, millions of fish frequent the shore of the ocean, from some unknown cause, even to philosophers, and that, at that time, they are easily taken. Rude nets or seines, manufactured from the tenacious bark of the "*tione*" tree, are generally used in taking them; and they are so expert and successful that the atmosphere is rendered pestiferous, for days at a time, in the vicinity of their fishing camps, from the refuse and surplusage, which they cannot cure before putrefaction takes place. This season does not generally last more than two weeks, at the end of which time both the fish and the Indians disappear from the coast for the year. In their conjugal relations they are like "Mormons." When a brave desires a wife or wives, he, like a true *Yankee*, goes to the parents and bargains for them, the same as he would go to a store for tobacco or whiskey. The price is generally a horse, or the value of one in something else. Their laws allow them to keep as many wives as they can support, and also permit them to separate, or voluntarily divorce themselves, whenever either party, from any cause whatever, becomes dissatisfied with the other. This, of course, renders their morals corrupt and bad. Fidelity is unknown amongst them, and they think it no sin to "cuckold" their husbands, if they divide the spoils with him. In fact, he is so low in this repect that he will frequently hunt a bargain of this character, that he may get a drink of rum thereby.

They have many fetes or festivals, or, as they call them in their language, "pow-wows," during the year. These frequently end in bloody fights, when many are killed. One of these feasts, which I have never yet seen a description of, and which, I believe, is not practised by any other known tribe, is of so extraordinary a character that I deem it worthy of description. As soon as the young female arrives at the age of puberty she is put, as it were, under the guard of an old woman, who closely watches her until menstruation commences As soon as this is noticed, the tocsin is sounded for a *tatamado* feast. It is obligatory upon the whole tribe to attend on this occasion. As soon as they get to together, they first dig a round hole in the ground, large and deep enough to take the poor girl in up to the neck. The whole tribe, except the managers, during this time, are drinking, carousing, and dancing in a circle around the scene of operations. After the hole is finished, it is filled up with dry wood, fragrant leaves and bushes, in such a manner as to be lighted from the bottom. On the annoucement that everything is ready, one of the old men of the tribe, a kind of prophet or priest, steps slowly forward toward the pile, with torch in hand, pronouncing, in a loud, clear tone, an incantation, which, for sublimity and pathos, is scarcely ever equalled by our more accomplished but less natural divines. As soon as the old man is through, a rude chant is hummed by the whole assembly. When this is closed the torch is applied, and as the flames arise heavenwards, the whole circle, on bended knee and with uplifted face, pour forth, in unison, a devout prayer for their future preservation from all evil. As soon as this ceremony is finished, the hole is filled or strewed over with fresh green fragrant leaves. The poor Indian girl is then placed, by force, in the hole, and covered up to her neck with the fresh earth just taken out. The heat left from the fire is frequently so intense as to make the poor thing writhe and howl with the most intense and burning pain for hours. No matter; the feast goes on, and the howl of the participants drowns that of the victim. She remains in this situation—without any food, or anything else but water, which is given to her frequently and freely, or she would die—immovably fixed in this hot, seething, vapor-producing hole for forty-eight hours. During all this time, dancing, singing and carousing of all kinds are kept up by the tribe around her. When she is taken out, of course she is more dead than alive, and she is taken by the old woman to a comfortable place, when she is restored and revived by the " medicine man " of the tribe. This is the signal for the breaking up of the feast, and all retire. Thus the mothers of the fair daughters of the forest " bring out " or notify to the world that their daughters are marriageble. It is true that there is some difference between this method and the fashionable one now in vogue in bringing out a *belle* in New York; but when one reflects that the same end is obtained—a husband—by either process, it is extremely difficult, in the abstract, to realize the difference. The women, as a general thing, marry at an early age, while the men seldom do so before their twenty-fifth rear. Like Zenobia, there does not appear to be much love on either side, and they say that there is no enjoyment in the whole affair, but that it is a necessity of nature for health and for the propagation of their species.

But little information can be obtained in relation to their diseases. During the spring and autumn, fevers of different types prevail, to some extent, among them. I have seen them sick with the common intermittent, bilious and continued fevers. Diseases of the chest, also, prevail to a considerable extent during the winter months. The exanthematous diseases play sad havoc with them when they come along. Their filthy and exposed manner of living will not do for this class of diseases. Of remedies they have, or at least use, but few. Each rancheria has a *sweat-house.* This is made by digging a large hole in the ground, and covering it over with timber, brush and earth, in the shape of a cone, making it air-tight, with the exception of a small hole in the top, for the escape of smoke. In this hole, which they dignify with the name of "*sweat-house,*" or *casa de sudor,* when anything is the matter with them, they keep a good fire, which keeps the place so warm that one who enters will, in a few moments, sweat terribly. After the patient has sweat sufficiently to satisfy their ideas of treatment, he strips off his clothing, and rushes out as if mad and jumps into the river, lake, or some other place filled with cold water. As soon as this becomes insupportable, he jumps out and runs or jumps about, until reaction takes place. Afer this terrible ordeal, he drinks herb tea, &c., and if he is not cured, repeats the same dose every day, until he gets well or dies. This is the treatment for most of their diseases. Last winter one of them had the small pox: he tried this remedy. It did very well until he got into the cold water, where he died before he could get out. I have seen them come out of one of these *sweat-houses,* seething and sweating at every pore, in the winter time, when there was snow on the ground and ice along the margin of the river—and plunge into the cold water as if it were nothing. How they can stand the sudden shock, I am unable to discover; but they do it with as much *nonchalance* as a Frenchman affects a duel.

For gonorrhœa they use a strong decoction of an herb that grows very plentifully here, and is called by the Spanish "chancel agua," and wild pigeon manure, rolled up into pills. The decoction is a very bitter astringent, and may cure some sores; but that it fails in many, I have undeniable proof. In syphilis they use the actual cautery—a living coal of fire applied to the chancre—and a decoction of an herb, said to be something like sarsaparilla, called rosia. It does not grow in this vicinity, and as I have never been able to get hold of any of it, I can say nothing about its medicinal virtues. It also frequently fails to cure this disease, and they have to get other aid or die. This completes the list of their medicines, if we omit the "charms," &c., which their "medicine men" alone know the value of, and use very profitably at times.

The accouchement of the female is somewhat different from the usual mode practised by other tribes. A few hours before the time arrives, she gets up and quietly walks off alone, as if nothing extraordinary was about to occur. In this way she deceives all, even her husband, and hides herself away in some secluded nook, near a stream or hole of water. At the foot of a small tree, which she can easily grasp with both hands, she prepares her " lying-in " couch, on which she lies down as soon as labor pains come on. When the pain is on, she grasps the tree with both hands, thrown up backwards over her head, and pulls and strains with all her might, thus assisting each pain, until her accouchement is over. As soon as the child is born, the mother herself ties the navel-cord with a bit of buckskin string, severing it with a pair of scissors prepared for the occasion, after which the end is burned with a coal of fire. The child is then thrown into the water; if it rises to the surface and cries, it is taken out and cared for ; if it sinks, there it remains, and is not even awarded an Indian burial. The affair being all over, she returns to her usual duties, just the same as if nothing had happened, so matter of fact are they in such matters. During the time which I had lived here I have never heard of one of these females dying from the effects of parturition. When any of them die they are generally respectably buried; but the hut and all the effects of the deceased are burned. Even his favorite horse is sometimes killed and committed to the flames, to appease, as they say, their great grief.—*San Francisco Medical Press.*

PROF. J. MARION SIMS.

By the Paris Correspondent of the London Lancet.

I have some further notes to add to what I wrote in my last concerning the operative procedures of Dr. Marion Sims in respect to certain injuries and disorders of women. Amputation of the cervix uteri is an operation now regularly admitted into the surgery of women for various diseases, including cancer and hypertrophy. In such cases Dr. Marion Sims was in the habit of employing the ecraseur, leaving the cut surface to heal by granulation, till about four years ago, when he hit apon a new plan, under circumstances which I will describe in his own words, from some notes which he has been good enough to furnish me at my request:—

"When the patient was fully etherized and ready for the operation, Dr. Pratt, house-surgeon to the Woman's Hospital, reported that the ecraseur was broken; so I had no choice but to amputate with scissors. I intended to leave the stump to heal over in the usual way by the granulating process, which would take three or four weeks; but while examining the wound and waiting for the bleeding to cease, the idea all at once occurred to me to cover the cut surface with vaginal mucous membrane, just as we cover over the stump of an amputated arm or leg by skin after the circular method. Four silver sutures, two on each side of the canal of the cervix, passed antero-posteriorly through the cut glass of the vagina, drew this membrane over the stump, covering it completely, but leaving an oval opening in the centre to correspond with that of the cervical canal. The parts united by first intention, just as in a vesico-vaginal fustula; the wires were removed in eight or nine days, and the patient was soon on her way home, not having suffered the least inconvenience from the operation."

Dr. Sims has operated thirty-three times by this method, and I believe it is the plan now adopted by Dr. Emmett at the Woman's Hospital. I have before me a report on this subject, read by Dr. Sims before the Medical Society of the State of New York in 1861. In a paper read before the New York Academy of Medicine by Dr. A. K. Gardner, on the amputation of the cervix uteri, this method of operation is also described, and carefully compared with other methods. The obvious advantage of covering the stump at once with mucous membrane, of which the approximated edges heal by first intention, is enhanced by the secondary immunity thus afforded from several of the dangers and inconveniences of the old operation. Dr. Gardner discusses the reasons for operating and the nature of the affection very carefully in his pamphlet, which is re-printed from the *Bulletin* of the New York Academy of Medicine, April, 1862; and to that volume, together with the original paper of Dr. Sims, I would refer those who wish to have further details, and to inspect the wood-cuts, which make the manner of proceeding immediately comprehended.

I believe the perineal operation is still greatly in use in England for remedying procidentia uteri. Dr. Sims has, however, abandoned it since 1857. He tells me that his reason for doing so is that he has not been satisfied with the completeness of the results, and that he has better reason to be pleased with those given by the procedure which he has adopted since 1857. This plan consists in narrowing the vagina by cutting off slips of mucous membrane at appropriate distances from each other, either on the anterior wall of the vagina or the posterior, as the peculiarities of the case seem to indicate; and then bringing the cut surfaces together by silver sutures. These in uniting will narrow the vagina, and this to any given extent previously determined by the operater—to about one third or more, as desired; if on the anterior wall, the denuded surfaces would generally be V-shaped, the apex being at the neck of the bladder. This plan is followed altogether at the Woman's Hospital, and, as I learn from its auther, who is the founder of this hospital, with considerable success.

It may seem not a little surprising to those who have not a skilled experience in the Paris hospitals, that an operation so familiar to British and American surgeons and obstetricians as the incision of the os and cervix uteri for dysmenorrhœa and sterility is not in the list of operations with which French practitioners are practically acquainted; but it certainly is so. Dr. Simpson, in Edinburgh, has rendered the proceeding classic; and its popularity in Britain is testified by the variety of instruments constructed for performing the double section, of which two by Weiss and Ravigny were shown in the last London Exhibition, and much admired. I heard M. Nélaton, at the end of a recent clinical lecture, when he exhibited a modification of these two-bladed incisors made by Mathieu for an English physician lately here (Dr. Savage), avow frankly his practical unacquaintance with the operation, and state his doubts on the matter. M. Nélaton appeared to look upon the question solely from the point of view of curing sterility in certain forms. He said that he had never performed the operation, and therefore had no experience of his own from which to deduce results; but he pointed out that, so far as removing sterility was concerned—and this was the only use to which on that occasion he referred—the passage of the cervix, however small, might suffice for the admission of spermatozoa. Calling to mind the extreme minuteness of these microscopic structures, and their marvellous activity and power of making their way to the interior of the womb under the most adverse circumstances, it might well seem an excess of complaisance to incise the os uteri so as to enlarge the canal where there existed any practicable passage at all. Indeed, remembering the very small aperture through which the spermatozoa will find their way and effect impregnation, M. Nélaton said that there was perhaps more reason to wonder that they did not lose their way in the very broad path open to them. He moreover referred to the possibility of serious hæmorrhage consecutive to the operation. When Dr. Sims arrived at Paris, he found that the operation was not known in surgical practice here, but he has introduced it with success. The following is an extract from his notes on this subject:—"My opinion was asked by a lady who had been married twelve years, without issue. I advised an enlargement of the os and cervical canal by incision, and then referred her to her surgeon for information on the subject. He said that I was quite right in supposing it impossible for her to conceive with the neck of the womb as it was, but that the operation would be attended with risk to life in Paris. Of course I could not afford to perform such an operation here without the full consent and coöperation of the consulting surgeon. Soon after this I fortunately met Sir Joseph Olliffe, who kindly invited me to perform this operation on a patient of his. Being familiar with English and American literature and practice, he was not in the least afraid to submit a lady of the highest rank to it. I operated on his patient Oct. 31st, 1862. She got well without the least trouble, just as she would have done in London or New York. On the 2d of December, 1862, with Sir Joseph Olliffe, I operated on the lady first mentioned; she is now in the seventh month of pregnancy. I have now performed the operation here fourteen times, and without the least constitutional disturbance in a single case. They have all gone on just as safely as they would have done in New York, where I performed the operation hundreds of times, hæmorrhage being the only accident, and that not a serious one if proper attention be given. Of the fourteen operations, conception has already occurred in four."

Finally, I asked Dr. Sims to give me the results of his practice as to the operation which he has introdued for the distressing affection to which he has given the name of Vaginismus—spasmodic sensitiveness of the vagina, precluding sexual connection—a condition existing in married life to an extent which is probably insufficiently known, and productive of considerable discomfort and unhappiness. Dr. Sims tells me he has operated over thirty times for vaginismus, and with perfect relief in every instance. He has operated on four cases since he came to Paris—one married two years, one twelve years, and one sixteen years, with the happy result of very early conception following in one of the cases.

These notes will, I am sure, be read with great interest by all who are concerned in the progress of what is now known as the surgery of women. The great advances made in that now brilliant department of surgery are in no small measure due to the original application by Dr. Sims of metallic sutures. But his subsequent labors—although nothing can rival what he has done for the previously incurable class of fistulæ—are all of them highly interesting, and, as will be sufficiently gathered from the short extracts which I have given, many of them of the highest importance.—*Lond. Lan.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, FEBRUARY 25, 1864.

Need of a Special Hospital for Consumptive Patients.—It is somewhat remarkable that in the wide circle of the numerous and various charitable institutions of New England there still remains an unfilled gap, which any reflecting person knowing the peculiarities of our climate, and the pathological predisposition of so large a number of our people, would have expected to have seen filled long since; we mean the need of an asylum or sanitarium for the victims of consumption. No other disease in our latitude counts so many victims, and in the larger cities no other disease so taxes the resources and calls forth the sympathies of private charity as does this; and yet the result of all charitable effort in this direction, for the want of the special comforts which a hospital expressly designed for this class of patients would afford, is most discouraging and unsatisfactory.

The need of some such provision is so obvious that it seems almost superfluous to mention it. Doomed as the sufferers from this fatal disorder are, in so many instances, to many weeks and months of invalidism, we cannot harshly question the judgment of those who control our various general hospitals, if they object most seriously to receiving them, as a general rule, within their walls. The protracted nature of their complaints makes them, if admitted, so long dependent on the bounty and care of these institutions, that a number of patients, suffering from curable, acute affections, might in succession have occupied the place filled by one such incurable one; and several lives might have been saved to the community where one poor victim has had his pathway to the grave only made smoother and easier. Any one conversant with existing hospitals must have often felt with poignant regret the necessity for excluding the majority of applicants of this class for this reason. How frequent is the exclamation, there ought to be a hospital for patients with consumption! A single fact illustrates this truth most forcibly. During the year 1863, among the out-patients of the Massachusetts General Hospital there were between two and three hundred cases of phthisis in its various stages. The very fact of their application there indicates their great want of the first requisites to ensure their comfort. No person poor enough to solicit gratuitous aid from a public charity can possibly be in the way of obtaining the comforts and luxuries which are absolutely essential in this disease. A large number of these patients, it is true, apply at this institution for a positive diagnosis and prognosis of their complaints, and after one or two visits disappear and no more is known of them. What mockery is it to prescribe a long course of expensive stimulants or tonics, with nutritious diet, to these poor victims, whose only resource for their daily bread is cut off by their inability to work! Hundreds of poor people in this community are thus at this very moment languishing away under the withering hand of this destroyer, who from first to last must depend on the uncertain dole of private charity, or the hardly-spared earnings of their immediate friends, and must, therefore, inevitably lack many things which would have greatly alleviated their sufferings.

But it is not of the hopelessly consumptive alone that we would speak—objects of the deepest sympathy as they are. There are others—we cannot say how many—whom the want of a public institution for their special treatment deprives of the only hope of improvement or recovery. What chance can a young sewing girl with incipient phthisis have, for instance, bending all day over her work, shut up from morning to night in a hot room with a crowd of others, unless she can be released from such drudgery and breathe a purer air? Many such there are who present themselves for examination, for whom there is a reasonable chance for greatly improved health, if not ultimate recovery, could they have the opportunity of coming under proper hygienic influences. As it is, they struggle on, subjected to the very causes which have developed their fatal disease, compelled to labor to keep body and soul together until the last moment of their failing strength, without hope of ever being any better, and only too happy if their sufferings are not greatly prolonged after their capacity for work has ceased. For this class there is a most urgent need of an asylum, where temporary relief might recruit their exhausted energies, allowing them to return perhaps for a time to their wonted occupations, possibly arresting entirely the advance of their destructive malady, and at any rate holding out to them the prospect of a haven of rest and comparative comfort when the inevitable doom has set the seal upon them.

There is still another aspect in which the establishment of a charitable institution for the treatment of consumption is of very great importance, namely, the opportunity which it would afford for the study and scientific treatment of this disease here. Of late years, as we all know, there have been very great changes in the methods of treating, and new theories have come into vogue of the special causes originating it. The climate and atmospheric influences of New England are peculiar, and require to be studied with special reference to this disorder. Our plans of treatment and theories of origin have heretofore been mainly borrowed from European authorities, whose researches have been conducted under very different conditions. Dr. Bowditch has only quite recently demonstrated the extreme probability that humidity of the soil is the exciting cause of consumption in many parts of New England. How important, then, that a healthy residence should be secured for those attacked by this disease, whose means do not admit of their choosing a home best calculated for their recovery! There are many methods of treatment, also, where the poor are the subjects of it, which can only be satisfactorily tried in a hospital; some of them are such as can hardly be used in any case except in such an institution. We are fully persuaded that we are far from having learned all that can be learned of this scourge of New England, and the opportunities which a special hospital would afford would give the very best chance for discoveries which would be of the greatest benefit to the whole community. Let us hope, therefore, that this gap in the circle of our public charities may not remain unfilled much longer.

MESSRS. EDITORS,—Our humorous friend the London *Punch* had, some time ago, a picture called "Wholesome Prejudice." A heavy-built old English gentleman is sitting at a table, on which stands his glass of "port," with which and indignation his face is flushed as he gives vent to the following, in answer probably to some inquiry of a fellow traveller:—"Railroads, Sir? I hate railroads, and I shall be very glad when they're done away with, and we've got the coaches again."

This was vividly brought back to my mind by seeing the answer of Prof. James Syme to the British Med. Jour. Oct. 24, 1863, in regard to "iridectomy." Certainly we all would agree that if iridectomy in Prof. Syme's hands "*too often results in destructive inflammation, lenticular opacity, and collapse of the eye-ball,*" the sooner it "disappears not only from" *his* "surgical practice, but from" *his* "surgical language," the better. Respectfully, B. JOY JEFFRIES.

15 *Chestnut St., Feb.* 19*th*, 1864.

PROF. JAMES SYME ON IRIDECTOMY.—Sir,—As you ask my opinion of iridectomy, I have no hesitation in saying that it has always seemed to me an entire delusion accepted for the cure of blindness, on the same principle which leads drowning men to catch at straws. Glaucoma has been regarded as so hopeless a disease, that it was peculiarly well suited for the proposal of an operation which promised merely to afford some chance of relief. Such being its modest profession, the destructive inflammation, lenticular opacity, and collapse of the eye-ball, which too frequently result from opening the cornea and cutting out a portion of

the iris, were not held to counterbalance the benefit claimed by patients so fortunate as to escape these dangers. But this alleged benefit, from what has come under my observation, does not appear to be at all different from that which every one laboring under incurable deafness may believe for a time he has received from the use of remedial means, whatever they may have been. The truth is, that any man who has paid money, and suffered pain, does not like to confess that his object in doing so has not been accomplished: while his attention and imagination being at the same time excited, he is apt to regard the feeblest glimmer of light, or the faintest perception of sound, as a symptom of improvement. Iridectomy will, therefore, I trust, soon disappear, not only from surgical practice, but from surgical language. I am, &c., JAMES SYME.
—*Brit. Med. Journal.*

THE prizes of the Boylston Medical Society of Harvard University for 1864, were awarded as follows:—To F. Minot Weld, of Jamaica Plain, for an essay entitled "Our Native Materia Medica," the first prize of thirty dollars.

To Edward G. Loring, of Boston, for an Essay on the causes of Exudation in Inflammation, the second prize of twenty dollars.

The Essays will be read at the next meeting of the Society, to be held at the Mass. Med. College, on Tuesday evening, March 18th. The past members of the Society are invited to be present.

HOWARD F. DAMON, M.D., *President.*

SURGEON HENRY A. MARTIN, U.S.V., is relieved from duty at Pilot Knob, Mo., and will proceed without delay to Fortress Monroe, Va., and report in person for duty to Major-General Butler, U.S-V., commanding department of Virginia and North Carolina.

The resignation of Lieut.-Col. Wm. H. Mussey, Medical Inspector U.S.A., has been accepted by the President, to take effect Jan. 1, 1864.

DEATHS IN BOSTON for the week ending Saturday noon, Feb. 20th, 99. Males, 52—Females, 47.—Accident, 2—apoplexy, 1—congestion of the brain, 2—disease of the brain, 4—bronchitis, 3—cancer, 1—consumption, 13—convulsions, 1—croup, 10—debility, 1—diarrhœa, 3—diphtheria, 3—dropsy, 3—dropsy of the brain, 3—dysentery, 1—bilious fever, 1—scarlet fever, 4—typhoid fever, 1—gastritis, 3—gout, 1—disease of the heart, 4—malformation of heart, 1—infantile disease, 5—intemperance, 2—disease of the kidneys, 2—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 8—marasmus, 1—old age, 3—paralysis, 1—premature birth, 1—puerperal disease, 2—scrofula, 2—sore throat, 1—unknown, 4.

Under 5 years of age, 49—between 5 and 20 years, 6—between 20 and 40 years, 16—between 40 and 60 years, 13—above 60 years, 15. Born in the United States, 67—Ireland, 19—other places, 13.

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THE

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SUCCESSFUL CASE OF OVARIOTOMY.

[Reported to the Boston Society for Medical Improvement, Jan. 11th, 1864, and communicated for the Boston Medical and Surgical Journal.]

By Henry G. Clark, M.D., Surgeon to Mass. Gen. Hospital.

Mrs. B., 59 years old; hitherto healthy; the mother of four children—two of them daughters and now living; had ceased to menstruate at the age of 50.

In February, 1863, she first noticed a slight fulness of the abdomen, with scanty urine and a red-colored discharge from the vagina. This discharge was repeated in March and April, recurring at regular monthly periods for six months thereafter, like normal menstruation. Dr. R. L. Hodgdon, of West Cambridge, who gives these particulars, was asked to see her in June last, when he found the urine scanty, the abdomen uniformly distended by ascites and the legs œdematous. Examination of the os uteri by dilatation, &c., and interrogation of the functions of the heart, liver and kidneys, elicited no evidence of disease of either of these organs. Ovarian disease was supposed to exist, but its presence could not then be verified, in consequence of the great distension of the abdomen.

August 21st.—Tapping was resorted to, the ascites having steadily increased so as to embarrass the respiration, and several gallons of water withdrawn. An elastic tumor of the left ovary, of the size of the fist, was then discovered. Tincture of iodine was painted on the abdomen over the tumor, and the ordinary diuretics, which the patient had previously taken, were continued without effect, the ascites soon returning.

October 1st.—Respiration much obstructed by the fulness; great œdema of both lower extremities, and of lower part of abdomen, with erythema of right leg. Patient confined to bed. Pumpkin-seed tea was now substituted for other diuretics, with marked increase in the quantity of the urine.

Oct. 15th.—Œdema had disappeared, and the ascites was diminished; abdomen softer.

Nov. 1st.—Urine again scanty, and the ascites increasing.

Dec. 17th.—Paracentesis, and about half the former quantity of water drawn off. Tumor now displays itself of a much larger size, and extending so far to the right side as to have obscured the diagnosis, if this had been now for the first time to be made; but clearly enough a movable, semi-solid, multilocular, cystic disease of the left ovary. The fluid discharged by tapping was decidedly not from either of the cysts, but from the abdominal cavity.

Dec. 30th.—After consultation with Dr. Hodges, and a full statement to her and her family of the chances and dangers of the operation, the patient decided she would have it done.

January 3d, 1864.—Drs. Hodgdon, Hodges and Putnam being present and assisting, the temperature of the room was raised to 80°, and the patient was etherized. Dr. Clark commenced the operation by making an incision from the umbilicus to the pubes. The peritoneum was found to be very much thickened from chronic inflammation, and its surface, both mural and intestinal, reddened and studded with minute granules. The accumulated ascitic fluid was carefully drained off, the tumor well examined by the hand, sweeping away some small adhesions on its front, and traced down to a very short thick pedicle, in fact, the broad ligament itself, which connected it immediately with the uterus. It consisted of three good-sized cysts, and of a large, solid base; the whole being too large to be removed *en masse*, it was materially reduced by bringing the cysts to the mouth of the incision, and then tapping them separately. One of them contained two pints of a dark coffee-colored fluid, one a pint and a half of a ropy straw-colored, and the third a somewhat larger quantity of a clear, wine-colored fluid. The tumor was then, with some little effort, turned out of the abdomen, and a long needle, armed with a stout double ligature, passed through the centre of the pedicle, close to the uterus, and securely tied both ways. The pedicle, over which, as a matter of precaution, a second ligature was cast, was then divided a little wide of the point of ligation, and left projecting like a ruffle one or two inches outside of it. The other ovary, the uterus, and the other abdominal organs were examined as far as it was proper to do so, and no diseased condition, save that first mentioned, was observed. The lips of the wound, taking care to include also the peritoneum, were closed by sutures, the pedicle being brought out at the lowest point of the incision, and fastened there by carrying through it one of the stitches intended to close the parietal incision. A compress and bandage completed the dressing.

The loss of blood was trifling, no vessel having required a ligature, and the patient seemed to have suffered nothing by the operation. There was no vomiting, prostration, or marked disturbance of the pulse.

At 1, P. M., half an hour after the operation, she took two grains of opium, and at night 40 drops of McMunn's elixir, and for nourishment, a little milk punch occasionally as she wished.

Jan. 4th.—Had a good night; pulse 100.

Jan. 5th.—The same. McMunn's elixir, 40 drops, morning and evening.

6th, 9, A.M.—Pulse 110; 6, P.M., 120, with soreness in abdomen, and a circumscribed hard swelling, 4 inches by 3, in the parietes of the abdomen, above the left ilium and over the region of the kidney. Urine scanty, with light sediment, but no signs of peritonitis. Ordered poultice and tincture of iodine to swelling Opiates repeated.

7th.—Less soreness; pulse 120. Sutures removed.

8th—Soreness and swelling diminishing; pulse 112. Opiates only at night.

9th.—An enema brought away a few scybalæ.

10th.—Pulse 100; no appetite, aphthous mouth, the white patches spreading from the back of the tongue and soft palate to the cheeks on each side. Discharge of thin, healthy pus around pedicle all the time abundant; the rest of the wound healed by first intention.

Jan. 12th.—A moderate dose of castor oil and lemon juice, followed by a lavement, produced several good dejections.

Jan. 16th.—Aphthæ leaving mouth; appetite for beef-tea, champagne and milk punch. Spontaneous dejection.

18th.—Ligatures came away. Pulse 80; urine abundant and clear; no return of ascites. The patient takes solid food with good appetite, sleeps well, is in excellent spirits, and appears to be progressing every way in the most favorable manner.

Feb. 4th.—Wound healed. Patient walking about her room.

Examination of Tumor.—Weight two and a quarter pounds, making, with the estimated weight of fluid discharged from the cysts, about eight pounds in all. It consisted mainly of two or three large cysts, the inner surface of which was everywhere covered with an abundance of a whitish, opaque, soft substance that resembled considerably, though it was tougher, the fibrinous matter that is often found under an inflamed serous membrane. Mixed with this substance was a considerable quantity of thick puriform fluid. On microscopic examination of this substance, Dr. Ellis found "numerous irregular granular cells, of various sizes, and without any marked characteristics. Many apparently broken, deformed and degenerating. Nothing decidedly cancerous." The tumor is preserved in the Museum of the Medical College.

The unfavorable circumstances of the patient's age and debility seem to have been counterbalanced by her remarkably equable and hopeful temperament; and the thickened condition of the peritoneum to have prepared it to tolerate the violences of the operation.

THE USE OF NITROUS OXIDE—LAUGHING GAS—CHLOROFORM, &c.

By A. C. Castle, M.D., New York.

[Communicated for the Boston Medical and Surgical Journal.]

The recent deaths of Mr. Sears, of New York, from the effects of nitrous oxide, or, vulgarly, "laughing gas," administered for "painless tooth extraction," and that of a lady from the effects of chloroform self-administered, have attracted the attention of the public and elicited the remarks of the press, but not, however, the *proper* attention and remarks which these cases, from the fatality or injuries which their administration by ignorant or incompetent persons are likely to cause, demand. It is true that one or more of the press urges the necessity of enacting a law prohibiting druggists selling chloroform, &c., unless prescribed over a physician's signature. In this age of progressive science and "free trade," and every body's right to meddle with subjects they do not understand, scanning the columns of the press, one might almost infer that the only true physician's prescriptions for all the ills that flesh is heir to, are to be found there. Under such circumstances a law would only tend to puzzle the druggist to discriminate which prescriptions emanated from a lion and which from an ass. Would it not be far more sensible, and at once reach the point, to enact a law prohibiting any person or persons using, i. e. administering anæsthetic agents to patients for minor surgical operations unless they have passed a satisfactory examination before a proper medical college or county medical society, who, granting a special license to use these subtle agents, will offer sufficient evidence that the person holding such *license* at least possesses knowledge sufficient to enable him to make a correct diagnosis of constitutional temperaments, and of the presence of organic or functional disorders with which applicants for tooth extraction may or may not be affected?

In the year 1800, Sir Humphrey Davy wrote: "As nitrous oxide, in its extensive operation, appears capable of destroying pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place."

Professor Flagg, M.D., Thomas W. Kennedy, M.D., P. B. Mignault, M.D., make oath before Hon. Josiah Quincy, Mayor of Boston, in 1844, and Dr. C. A. Taft and Dr. John C. Warren, also Daniel T. Curtis, Esq., testify that Dr. Wells first used nitrous oxide as an anæsthetic. He afterwards abandoned this gas for ether anæsthesia. S. M. Fuller, M.D., of Hartford, Dr. P. W. Ellsworth and E. C. Marcy, M.D., of Hartford, now of New York, Dr. G. B. Hawley, and John M. Riggs, Esq., Dentist, of Hartford, certify before the Mayor of that city, in 1844, that Dr. Wells first employed nitrous oxide. Numerous other gentlemen testify to this use of nitrous oxide by Dr. Wells. This statement is due to truth, because a travelling exhibitor, the head of an association, publishes and advertises his claims that "*he first* introduced and demonstrated—May, 1863—the value of this new and wonderful agent, and since May last has daily administered it for the extraction of teeth; although he has administered it to persons suffering from all sorts of diseases—lung complaints, heart disease, &c."

"Laughing gas" was introduced, in the character of an anæsthetic agent, in dental extraction, in the month of April (April 1st?), 1863, by an itinerant mountebank, who for years past has travelled over the country exhibiting fools super-excited into hysterical demonstrations, showing the worst characteristics of poor human nature, "accompanied with song and grotesque amusements," with the assurance that "persons visiting these exhibitions shall be safe from the violence of those inhaling this gas," and exhibiting themselves, and those who misrepresented abused nature by acting under its assumed inhalation.

Anæsthesia for tooth extraction, like many other boons to the human family, has had its periodic and sporadic attacks, which have run their course of charlatanisms. Some twenty-five years since, Mesmerism had its brief but profitable hour. In practice it was a contemptible failure; but an "enlightend public" ran mad after this wonderful phenomenon practically (!) applied. Eight or ten years after this, Boston gave to suffering humanity ETHER, which was at once adopted by the whole medical world—by the scientific and by the learned. Soon after chloroform followed, with what advantages needs no comment here. Sufficient is it, that one or the other of these anæsthetics possesses the confidence of all surgeons and a very large majority of physicians, in cases where their exhibition may be of advantage. Some six years later, congelation or freezing the gums was almost universally recommended and adopted, in England and in the United States, as being the desideratum far painless tooth extracting. This method paid the dentist very well for a time, until the unfortunate patient discovered the remedy to be far worse than the disease—weeks of neuralgic or rheumatic pains frequently following the "breaking up" of the frost in the jaws. This freezing process, then, being thawed out, was followed by a more scientific application, viz., the electro-galvanic battery. The poles were attached to the forceps, &c., and the tooth was to be extracted simultaneously with the electric shock. Here *was* science! certified by many as the *ne plus ultra* of perfection. This scientific method was soon given up, as too many of the patients merely had their nerves tickled with electric reminders, while the operator, chemistry and electro-philosophy all acted independently of each other, and the innocent but offending tooth persistently refused to quit the jaws of the triple-afflicted patient. "The last stage of this eventful history" is the attraction of a travelling charlatan, whose "sans teeth" is produced by the exhibition of "laughing gas."

It would be trifling with the erudition of the readers of this JOUR-

NAL to attempt to prove to them that nitrous oxide has been known from the days of Priestley and Sir Humphrey Davy. What may be its chemical and physiological influence upon the animal economy; or what its therapeutical character, influence and results when applied in organic diseases of the lungs, bronchia, larynx, heart; or mere functional derangements of these organs, it is not necessary to dwell upon in this paper.

Most medical men are aware of the preparations of nitrous oxygen; that imperfectly prepared nitrous oxide is a deadly poison to those inhaling it. The nitrous oxide, prepared by the scientific chemists from properly prepared chemical agents, will produce this gas chemically pure, so that it may be inhaled without producing immediate death (perchance without any injury), whatever may be its beneficial effects following its therapeutic use, or the injury following its abuse. It is right that the medical profession should be made acquainted with the fact, that whatever merits or demerits, as an anæsthetic or therapeutic agent, nitrous oxide may possess, either as an exhilarant, stimulant, phlogistic, congestive or irritant, or chemically or physiologically when drawn into the human lungs, not a single chemist, druggist or pharmacien prepares a particle or atom of nitrous oxide for private anæsthetic use, or to supply dentists. It is almost entirely manufactured by persons totally ignorant of chemistry, and who could not even give a proper definition of the word or meaning of chemistry. It is manufactured from the " directions " accompanying the cask apparatus sold for preparing nitrous oxide in large quantity.

Of the filthy and disgusting mode of administering laughing gas, and the dangerous results likely to attend its introduction into the ramifying passages of the lungs, let the following statement serve as an illustration.

Presuming the nitrous oxide chemically pure, it is contained, for dentists' purposes, in a gum-elastic sack holding from four to eight gallons of this gas. Into this gum-elastic bag, through its narrow neck, is permanently fixed a breathing tube about one inch in diameter and from six to eight inches long. Into this breathing tube a " mouth-piece " is fitted, which is made to enter the mouth about one and a half inches, locked air-tight over and against the lip aperture by a flange about an inch wide, similar to the mouth-piece of a wind instrument. The operator compresses the nostrils close with his fingers. The patient now inspires the gas from the sack into his lungs, and expires the breath back into the sack. The patient again, again and again respires and re-respires the whole quantity of gas contained in the sack, including the poisonous carbonic acid gas expired after each respiration. This process is continued until the patient is rendered insensible or asphyxiated. If the operator be an expert, two, perhaps three teeth may be extracted while the patient remains in a somewhat spasmodic anæsthetic state. The patient then becomes restless and violent, with hysterical laughter, shouts, or spasmodic screams and yellings. If more teeth are to be extracted, more gas is administered, so that a person may be required to inhale from four to sixteen gallons of nitrous oxide, poisoned with the carbonic acid gas eliminated from the lungs.

Three cases, already, have come under my notice, of persons injured by this gas. First. A young lady, some six weeks since, had four teeth extracted. She inhaled gas four times, since which she has been affected with periodic vertigo, headache, dimness of vision and ringing noises in the ears, indicating cerebral depression or congestion. Second. A young lady three weeks since had three teeth extracted. She inhaled gas twice, and has had oppressed breathing since, stricture across the breast, and occasionally expectorates bronchial mucus tinged with blood. Third. A young man inhaled gas for a long time, four weeks since, and was only reduced to the hysterical condition. He has not been well since. His symptoms are general debility, with melancholy. These persons, previous to inhaling the gas, enjoyed good health.

These affections, though trifling thus far in themselves, may, as no doubt in numerous cases they will, lead to serious complications, when we reflect that the mouth-piece, the breathing tube, and the interior walls of the sack are constantly covered and saturated with the watery exhalation from the lungs, the putrescent emanations of decayed teeth and suppurating gums—the vitiated secretions and all the various morbid conditions to which the different parts of the respiratory apparatus are liable. In the case of Mr. Sears, for instance, the lungs were very extensively destroyed.

Chloroform and ether under all the circumstances, then, pre-eminently surpass in cleanliness and purity the nitrous oxide as at present administered; with the additional vital recommendation that neither of these agents passing from the lungs is respired back into the lungs, carrying with the inspired vapors the filth of other mouths. These agents, also, certainly are more safe in their action on the lungs, than the nitrous oxide poisoned with carbonic acid gas and carrying with it possibly an impregnation of tuberculuos poison to inoculate the lungs with tuberculous disease. "*I do not want all the milk,*" exclaimed a dentist, sputtering the liquid filth from his mouth which he had just drawn into it from the mouthpiece and tube while exhibiting before the Society of Dental Surgeons of the City of New York.

The most remarkable feature in the administration of this gas, contrary to the usual fastidious taste of ladies generally who criticize the hands, the dress, the napkins, and the *ensemble* of the dentist and his office accessories—who expect the dentist to perfume his person with the essences of ten thousand flowers, and to rinse his hands in otto of rose or cologne water each time he approaches them—is, that without hesitation—nay, with eagerness, they thoughtlessly demand the employment of this filthy process. It may be answered that the apparatus is always washed after having been used. This is not always the case. After office hours the mouth-piece is washed clean, but the rest of the apparatus is merely rinsed out. Every housewife is aware of the state of uncleanliness of any culinary utensil that is not properly scrubbed out after each using. What will they say of a soft, fibrous, enclosed sack daily, weekly, and by the month after month, used by scores of persons of all habits, which is merely rinsed out with water ? Few physicians of any standing in medical practice could be found in the United States, or in any other part of the world, so lost to all medical principles, to the faithful discharge of their divine calling, or the moral obligations due to their confiding patients, as to permit them to subject their patients to this horrid, outrageous and offensive absorption of inoculating and deadly poisons.

It is due to the Society of Dental Surgeons of the City of New York to state that it has not endorsed the use of nitrous oxide *as now administered ;* and it is also due to the dentists of respectability of the city of New York and Brooklyn to state that few, if any, use nitrous oxide in their practice.

New York, Feb. 11*th*, 1864.

ON THE ANTIPHLOGISTIC METHOD OF TREATMENT.

By Henry Veale, Assistant Surgeon, Royal Artillery.

What are we to understand by the term antiphlogistic treatment?

Etymologically, it signifies that which is opposed to inflammation; but, as a technical phrase, it usually implies the employment of means for reducing the quantity and quality of the blood.

Formerly very little doubt was entertained as to the efficacy of such means, but in recent times the propriety of depletion in the treatment of acute inflammations has been denied by a large and constantly increasing nnmber both of physiologists and physicians. It is strange, indeed, that there should be a difference of opinion as to a matter in which the correct observation and interpretation of facts are all that is necessary for the discovery of the truth. The minds of men and their powers of observation are, however, so liable to be warped by the influence of preconceived opinions, that one ought always, before venturing to express a condemnation of their conclusions, to consider the various media, moral and mental, as well as physical, through which the facts themselves may have been regarded.

Thus, if we trace the history of medicine no farther back than the last hundred years, we shall find that the theories which, until recently, have most prevailed concerning the nature of inflammation, have all seemed to sanction and enjoin the practice of depletion for its cure.

Cullen, for example,* considered "a spasm of the extreme arteries supporting an increased action in the course of the same as the proximate cause of inflammation." He believed that at least in every considerable inflammation there was increased tension, tone, and activity of the whole vascular system, and that this condition was "most effectually taken off by the relaxing power of bloodletting." To diminish the action of the heart and arteries, and to take off the spasm of the particular part, were his chief indications for the employment of remedies, which, whether diluent, refrigerant, sedative, sudorific, emetic, or purgative, were all, like bleeding itself, although not in the same degree, more or less depletive.

Hunter's† view of inflammation was somewhat different. According to his theory, there is in inflammation "either an increase of life or an increased disposition to use with more violence the life which the machine or the part is in possession of; and also there is an increased size of vessels, and of course an increased circulation in the part inflamed, and in the constitution in general."—"We find," he says, "from common observation, that many circumstances in life, as also many applications to parts, will call forth the contraction of the vessels. We are, from the above theory, to apply such means; and whatever will do this without irritation will so far counteract the effects." And again—"The contraction of the vessels is produced in two ways: one by producing weakness—for weakness excites the action of contraction in the vessels; the other, by such applications as induce the vessels to contract"—"The means of producing absolute weakness are bleeding and purging."—"The soothing [i. e., the means of *inducing* the vessels to contract] may be produced by sedatives, relaxants, antistimulants, &c."

Alison,‡ writing nearly fifty years later, says, that "inflammation consists essentially in a local increase of a vital property of attraction existing among the particles of the blood, and betweem them and the surrounding textures, and with which other vital properties are connected and simultaneously excited." Of the remedies he considers that "the only one on which absolute reliance can be placed is bloodletting;" "the efficacy of which," he adds, "would appear to depend on two principles," "to which, indeed, the powers of all other antiphlogistic remedies may be ascribed; *first,* That it weakens the heart's action; and, *secondly,* That it causes a derivation of blood from the affected parts."

And Dr. Watson,§ even in the last edition of his Principles and Practice of Physic, says, "Blood being the natural stimulus of the heart, we should deem it probable that the removal of a portion of that fluid would diminish the force with which the heart contracts; and as an inflamed part contains a preternatural quantity of red blood, and as (with the exception of resolution and mortification, which really are *terminations* of inflammation) all the *events* of inflammation depend upon the exudation of certain parts of the blood from its containing bloodvessels, we should be inclined, *a priori*, to believe that the amount of those exudations would be checked and limited by lessening the supply of blood to the inflamed organ, as well as by abating the force with which the blood reaches it. And we find it in fact to be so." "Blood," it is added, "forms the pabulum of the whole process;" and the conclusion follows, that "the great remedy in acute and dangerous inflammation is bloodletting."

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* "Cullen's First Lines."

† Hunter on the Blood, &c., pp. 334 and 335, passim. London, 1793.

‡ Outlines of Pathology. Edinburgh, 1843.

§ Principles and Practice of Physic. London, 1856.

Other theories have been advanced at various times, and have appeared equally to support the practice of depletion; but I have quoted the above-named authors in preference to others, because they have been either the originators or the most commonly accepted exponents of the main principles on which medical practice has been based, at any rate in this country, during the last hundred years. It would be foreign to my present purpose to attempt a refutation of their doctrines in detail. I shall therefore assume that these are no longer tenable, referring only to the works of Paget*, Virchow,† Todd,‡ Bennet,§ and Carpenter,‖ as my authority for doing so.

But the question, as to whether in inflammation there is an increase or a decrease of the vital powers, is one of so much importance, when considered in reference to bloodletting as a therapeutic measure, that it may not be amiss to devote a little time to its further examination.

Although one cannot but acknowledge that Hunter was right in the distinction which he drew between the healthy and the unhealthy inflammation, it by no means follows that either the one or the other is ever of a *sthenic* character; if by the word *sthenic* there be meant an increase of the *vis vitæ*, acting either as a cause or as a concomitant of the process. Certain inflammations, in fact, are healthy or unhealthy according as the body in which they occur happens to have been in good health or bad. Thus the *simple* inflammations may or may not be healthy; but the *specific* inflammations, such as the gouty, the rheumatic, the scrofulous, the diptheritic, the syphilitic, &c., are always more or less unhealthy. The former—i. e., the healthy—tend to run a speedy course and to terminate favorably; the latter—the unhealthy—have a proneness to run on indefinitely, to impair the organism, and to end unfavorably; but in neither case can it be shown that there is an increase, or indeed anything but a decrease, of vital force. The transition from the healthy to the unhealthy inflammations is by sensible gradations, and, notwithstanding that the two extremes are sufficiently distinct, the difference between them is mainly one of degree.

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* Lectures on Surgical Pathology, edited by Dr. Turner, 1863.

† Cellular Pathology, translated by Chance.

‡ Clinical Lectures "On Certain Acute Diseases."

§ Lectures on the Molecular Pathology, in Lancet, 1863.

‖ Principles of Human Physiology, 1856.

Perfect health, it may be said, is that state in which the vital powers are at their highest point, and it implies an ability to perform with efficiency and ease all the various functions for which the organization of the individual may be adapted. This definition of health, although perhaps not unexceptionable, is still sufficiently correct for our present purpose. Health, then, as I understand it, is something more than mere life—it is the perfection of life; and if this view of it be the true one, then any deviation from the condition which it involves can only be in the direction of the opposite state, viz., death—the cessation of vital power. Hence it may be inferred, that even the existence of inflammation in the body is a proof that the latter has suffered a decrease of its vital force; and this conclusion is supported by the fact, that such an affection renders the system unable to resist those predisposing and exciting causes of disease, which, under ordinary circumstances, it would sustain with impunity. It would also follow, as a necessary consequence, that the symptoms by which inflammation manifests itself, no matter what impression they may be calculated to convey to the minds of the unskilled, ought to be regarded as indications of diminished vitality, differing only in degree.

It is more than probable that, in considering the etiology of inflammation, systematic writers have not hitherto been in the habit of attaching sufficient importance to the influence of great functional activity as a predisposing cause. The liability to diseases of the thoracic organs in the inhabitants of cold and temperate climates, shows the effect of great and long-continued functional activity on the part of the lungs in predisposing them to inflammation; and the tendency to disorders of the abdominal organs in the inhabitants of tropical countries shows the same fact no less clearly. Excessive functional activity, or, in other words, the over-exertion of a part, necessitates indeed an increased degree of nutritive activity, from which condition to that of actual inflammation there is but a single step. But health is only compatible with a proper control over, a due regulation and balancing of the nutritive process; the moment this control is lost there is a departure from the healthy state, and inflammation, as we call it, is the result. Mammitis, pneumonia, hepatitis, &c., are oftentimes examples of nutritive powers overtasked in consequence of excessive functional activity. In such cases there is nothing that can be considered truly sthenic:—the vital force is not increased; on the contrary, it is simply overborne.

The objections to the theory that the process of inflammation had as its concomitant an increase of the vital powers, did not fail to present themselves to the sagacious mind of Hunter. Thus, he observes, towards the close of his immortal work, "Whether the disposition for inflammation and the change produced in the blood arise from a real increase of animal life, or whether it is only an increase of a disposition to act with the full powers which the machine is already in possession of, is not easily determined; but it appears to be certain that it is either one or the other. There are some circumstances, however, that would incline us to suspect it to be the latter; because there is often inflammation when the powers of the machine are but weak, when it appears to be only an exertion of very weak powers arising from some irritation produced."

In this passage, an increase of the vital *force* is evidently distinguished from an increase of vital *action* resulting from diminished power; and one cannot but feel surprised that the mind which could perceive so distinctly the direction in which the truth lay, should at the same time have entertained the notion that there was such a condition as that of a too perfect health. It is necessary to make another extract here, in order to show on what grounds the latter theory is based.

"I do not," he remarks, "look upon full health as the best condition to resist disease; disease is a state of body which requires a medium; health brooks disease ill; and full health is often above par. Persons in full health are too often at the full stretch of action, and cannot bear an increase, especially when diseased; and, as I before observed, it is a new impression on the constitution, and till it be in some degree accustomed to local disease, it is less able to bear such as is violent."*

To any one who takes the trouble of carefully examining this part of Hunter's work, it must, I think, become evident that Hunter fully perceived the inherent weakness of this theory, and its opposition to the whole tenor of his observation and reasoning. Indeed, it is diffiult to avoid the conclusion, that it was put forward in order to reconcile the practice of depletion, so universal in his day, with his entire conviction that "strength probably under every circumstance produces good results."†

Certainly, it used formerly to be the practice of surgeons to submit their patients to a course of purgation and low diet before performing any serious operations; but a more enlightened experience has fully proved that, in surgical practice, the theory that "health brooks disease ill," is entirely erroneous; nay, more, that it is the very opposite of the truth; and consequently we find that in the present day no surgeon ever thinks of adopting this practice. Where shall we now look for a man "in full health?" To the prize-ring, I imagine, if anywhere; but if we refer to the records of "*Bell's Life*," we shall find that Sayers and Heenan, being in the highest possible condition, or, in the language of Hunter, "in full health," and even "at the full stretch of action," recovered with extreme rapidity from the injuries which they sustained in their memorable conflict. The whole history of the prize-ring, of the stable, and of the cock-pit, is adverse to the theory that "health brooks disease ill." Men in the most perfect health, or "*in the highest condition*," according to the sporting phrase, recover "with wonderful facility from the effects of injuries, and their wounds heal very rapidly."* The fundamental error, in fact, has consisted in the supposition that inflammation was attended with an increase of vital force. The terms "vital action," "vital activity," "vital powers," and the like, have often been used too loosely, and as if they were mutually convertible; whilst the outward manifestations of abnormal or "*increased*" action have been looked upon as proofs of an increase of vital strength. As Dr. Carpenter observes, "Although it has been customary to speak of inflammation as a state of increased action in the part affected, of which increased action the augmentation in the bulk and weight of an inflamed part, and in the quantity of blood that passes through it, together with its high temperature and more acute sensibility, would seem to furnish sufficient evidence; yet all these signs are found to be deceptive when they are more closely examined; and the conclusion is forced upon us, that the vital power of the part is really *depressed* rather than exalted."

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* Hunter, op. cit., p. 233.
† Ibid., p. 228.

It seems to me that, in the controversy which has taken place on this question, too much reliance has been placed on the idea that there are sthenic and asthenic "waves of time," according to the picturesque expression of Dr. Watson.† The statement of Dr. Alison,‡ that "the symptoms and particularly the constitutional fever usually attending internal inflammations have undergone a very considerable change since the early part of the present century," however valuable as the opinion of an eminent physician, has been accepted, it is probable, more from deference to his authority than from regard to the facts themselves. If we were to take our opinions concerning inflammation and its treatment solely from the writings of Cullen, Gregory, Armstrong, Alison, Clutterbuck, Watson, &c., we should be compelled to admit that from the time when Cullen wrote, up to a very recent period, the sthenic type of inflammation continued to prevail; and, indeed, it seems difficult at first sight to resist the evidence of so many and such excellent observers. But we must remember, if we would seek to be impartial in our judgment, that there are authorities to be cited on the opposite side of the question. Brown, for example, although a pupil of Cullen, did not hesitate to proclaim a doctrine that differed entirely from that of his master. But there were circumstances connected with the career of Brown which prevented his contemporaries in this country from acknowledging his merits as a physician. Abroad he has been held in higher estimation; and it is to be hoped that his writings will before long assume amongst ourselves the prominence to which their unquestionable ability entitles them. As, however, the value of his evidence may still be called in question, I shall not lay any stress on it; and I may dispense with his testimony the more easily, because the writings of John Hunter can be adduced on the same side. The remarks made by him, now exactly seventy years ago, almost seem as if they had been written yesterday. "It is observed,"* he says, "by some of the ablest physicians of this day, that the fever called inflammatory is now not so common in this country as it was formerly represented to have been; that it is now seldom that in fevers they are obliged to have recourse to the lancet, at least to that excess which is described by authors in former times. They are now more obliged to have recourse to cordials than evacuations; and indeed the disease called the putrid fever and putrid sore throat [diphtheritis ?] are but of late date."—"I remember when practitioners uniformly bled in putrid fevers, but signs of debility and want of success made them alter their practice."—"Whether the same difference takes place in inflammation I do not know, but I suspect that it does in some degree."—"I believe we have much less occasion for evacuations in inflammation than there were formerly; the lancet, therefore, in inflammations and also purgatives are much more laid aside."—"We certainly live now more fully than what they did formerly. We may be said to live above par. At the full stretch of living, therefore, when disease attacks us, our powers cannot be excited further, and we sink, so as to require being supported and kept up to that mode of life to which we have been accustomed."

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* Carpenter's Human Physiology, 1856.

† Watson, op. cit.

‡ Alison, Edinburgh Medical Journal, 1857.

It is almost incredible that these words, corroborating so strongly the observations of Brown, and written probably during the lifetime of Cullen, Gregory, and Alison, have never received the attention they deserve. It is evident that, if we may consider Hunter as a competent witness in this matter, an adynamic phase of disease prevailed whilst he lived and wrote; but if we believe this statement, we must disbelieve the assertion that Cullen and Gregory, and their disciples, were correct in their views, or in the practice which they adopted for the treatment of inflammations. Furthermore, if we admit this evidence of Hunter, and also believe, with Winslow,† Clark,‡ and others, that the human race is still undergoing deterioration, owing to the excesses and vices of civilization, we must wonder how it happens that man still manages to live his "three score years and ten;" for the present "adynamic wave" seems to have lasted very nearly a century; and if we are to judge from the practice that is every day becoming more and more general, of "having recourse to cordials rather than to evacuation," it is still very far from being likely to give place to one of a sthenic character.

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* Hunter on the Blood, etc., 1793, page 227.

† Journal of Psychological Medicine, July, 1857.

‡ Treatise on Pulmonary Consumption.

The advocates of the change-of-type theory appear to have ignored altogether the evidence of Hunter concerning the medical constitution, as it is called, of the time in which he lived; and therefore, until farther proof is adduced in favor of this hypothesis, we shall be justified in refusing to accept it. We may likewise be entitled to doubt whether the degeneration of the human race has not rather been a convenient theme for the sickly fancies of the poets than an actual fact; for such a continual process of degradation as the poets have conceived, and many medical writers have really believed in, would, if there be any truth in Darwin's theory, have made gorillas of mankind long before now, had it been really in operation.—*Edinburgh Medical Journal.*

[To be continued.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MARCH 3, 1864.

ASYLUM FOR INEBRIATES.—The address of His Excellency, John A. Andrew, to the Legislature of Massachusetts, recently published, furnishes, with its accompanying documents, unusual matter of interest to the medical profession, and evinces the same fostering spirit towards institutions of learning and philanthropy which has throughout characterized his patriotic and far-seeing administration. Among the papers appended to the message there will be found an account of certain interesting experiments made by Dr. Morrill Wyman, of Cambridge, upon the nature of pleuro-pneumonia in cattle, to which we shall refer at some future time, and a report to the Governor and Council, made by Hon. Alfred Hitchcock, in his capacity of a Councillor and also a member of the special commission on lunacy, on the subject of a Hospital for the Curative Treatment of Inebriates, to which His Excellency refers in these words: "I earnestly invoke for this eloquent and ably reasoned document on a subject too long neglected, the attention of the General Court."

Dr. Hitchcock's report is chiefly devoted to an account of a visit made under special instructions of the Governor to the Asylum for Inebriates at Binghamton, N. Y., which has been projected by Dr. J. E. Turner, and built by the funds raised by private subscriptions through his own exertions. The institution, now nearly finished, will accommodate 500 patients, and is intended to be self-supporting. This gentleman, according to Dr. Hitchcock, has made a special study of inebriety for nineteen years in this country and in Europe, and shows, from the results of over 300 *post-mortem* examinations of inebriates, "that the anatomical changes are *specific,* and more certain and palpable than in cases of insanity from other causes. He also shows that, in 1,179 cases of delirium tremens, under his observation, 816 of them were hereditary, having an inebriate parent or grandparent, or both ; and that 55 per cent. of all our insanity, and 68 per cent. of all our idiocy, springs directly or indirectly from inebriety alone. He also shows that a distinction should be made between *intemperance* and *inebriety;* the first being improper indulgence against warnings of conscience, an abuse of natural or artificial appetite, while there is *will* and *power* of choice ; in short, the common intemperance of society, down whose rapidly descending steps the tottering legions pass unconsciously across that shadowy and undefined line which transfers them to the class of inebriates. On the one side of this line the family, the school, the church, and the civil law may hopefully exert their reformatory power, and rightfully inflict their penalties ; on the other side of this line the *inebriate* is a *diseased man;* diseased *mentally, morally* and *physically.* He is still also an intemperate man, but his will is powerless, his conscience is gone, and he drinks per force of the anatomical changes which have taken place in his own body. He is now without legal or moral accountability for his irresistible appetite. This disease of inebriety is both hereditary and self-induced ; and when hereditary a small amount, and we cannot give the minimum of the exciting cause, will suddenly develop the disease with clamorous and irresistible power. . . . .

"The theory of asylum treatment is, in its largest sense, *preventive,* as well as *curative* and *custodial;* and in no degree will it curtail or supersede all possible antecedent or coöperative reformatory influences. For more than a quarter of a century philanthropists have been engaged in associated efforts to suppress the use of intoxicating drinks as a beverage. They have doubtless done good, much good to individuals ; and yet moral suasion and coercive measures have both proved unavailing to stay the desolating increase of drunkenness. Reliable statistics show that from 1840 to 1850, in this country, insanity and idiocy, chiefly caused by inebriety, increased 80 per cent."

There can be no doubt that a vast amount of misery might be prevented by the establishment of a similar institution in this State. Private asylums, like the excellent Washingtonian Home in this city, already do much to assist the inebriate in his weak endeavors towards beform, and to relieve the household of its burden of such a member, but they cannot compel a residence sufficiently long to effect a cure, or receive those who have committed crime while rendered temporarily insane by alcohol. In a State hospital, however, power may be granted by which every patient shall be retained one year at least, whether offering himself voluntarily as an inmate or committed by a court of justice, and his discharge or retention after that period should rest with the commission appointed for such purpose. We must consider the inordinate love of strong dring as a *disease,* and as one which cannot be treated in the ordinary way by the physician, inasmuch as restraint is absolutely necessary. The State, however, has always regarded it as a crime, and has punished where it ought to have offered the means of cure. The gist of the whole question, as the Rev. Kendall Brooks states in the appendix to Dr. Hitchcock's valuable report, is just here : "and to say nothing of the claims of philanthropy, a true economy not only warrants, but demands that some provision be made by the State for rescuing men who are subjects at once of disease and crime.

The most enlightened nations have ceased to treat an insane criminal simply as a criminal. His insanity is taken into account in determining the treatment he is to receive. Why should not the same principle be applied in the treatment of the criminal inebriate? And if the inebriate who has become a convict under the laws of the Commonwealth, why not still more of one who has not been convicted of any crime, but who may desire for himself, or whose friends may desire for him, that the power of his terrible disease may be broken, and he be restored to the State and the world, a sound and useful citizen? It is only within a few years that attention has been called to this claim of philanthropy and political economy. Some of the States of our Union, and some of the countries of Europe, are already taking the first steps towards the establishment of Asylums for Inebriates. May we not hope that Massachusetts, as in so many instances, so in this, will be among the first to meet this claim alike of humanity and expediency."

We trust that the legislature will give their serious attention to this question, which has again been forcibly presented to their consideration during the past week in the report of the Board of Commissioners on Lunacy.

Messrs. Editors,—Your Journal of the 11th inst. contains a report, by Dr. J. G. Blake, of Boston, of a case of poisoning by opium, with an account of the treatment of the case and death of the patient.

There are a few considerations in connection with the ordinary course of treatment pursued in this class of cases which I wish to present, and I shall stand the best chance, probably, of making myself understood if I offer my remarks by way of criticism upon Dr. Blake's practice, as he details it in his case.

I gather from the report that the ounce of laudanum had been swallowed something more than two hours before Dr. B. saw the patient. Certainly its influence as a stimulant had entirely passed by, and the patient was in a state of genuine debility. I wish to ask, now, if this is a suitable case for the administration of such a sedative as a drachm of ipecac. and ten grains of sulphate of zinc; or, is this a state in which the prostrating influence of an emetic is desirable, provided the medicine will act as such? The treatment was commenced "by shaking pretty roughly for a few moments." Now, suppose we should go in this way at work with a patient in an extreme state of debility from any other cause; what would happen? Anybody can answer—he would die. But suppose we gave him over to the buffetings of "six or eight men and two police officers," and in the midst of the flagellation repeated the sedative of ipecac. and saw added to it the prostration of a season of vomiting. Should we not consider recovery miraculous?

Not to pursue this course of inquiry any further, we must now inquire why the patient failed to recover, after the apparent improvement which took place. Was it not because his powers had been so thoroughly broken down, in the course of this excessive exercise, in the midst of his extreme debility?

I am by no means oblivious to the course of treatment recommended by the authorities for cases of poisoning by opium, and my intention is, to call in question the propriety of just so much of the whole of it as relates to the use of emetic remedies and perpetual exercise in the second stage, or the state of debility of all the cases. Dr. Pereira believes there is no such thing as an antidote to the effect of opium known. Dr. Headland thinks that the only way in which the effect of opium is recovered from, is by the elimination of its particles from the system; and Dr. Wood believes that "death is produced by a suspension of respiration arising from the want of due influence of the brain."

Allowing that these opinions are correct, let us see what course of treatment is deducible from them. That the stomach should be cleared of its contents as soon as possible needs no argument, but it should always be done without emetics—for two reasons:—First, to avoid the sedative influence of emetic medicines; and, second, to avoid the labor of vomiting. Hence the stomach should always be emptied by pumping.

The elimination of the opium from the system requires time, and free action of the excretions. Then as long as respiration goes on uninterruptedly, the treatment is complete. Time will conduct the whole matter of recovery. But if the respiration fails, resort should be had to two things. Respiration should be promoted by slight agitation of the body, and when this fails we must depend upon artificial respiration; and this done, all is done. There certainly is no sensible view of the case that does not condemn this severe exercise.

The use of an infusion of coffee may be desirable, for the simple reason that a combination of coffee and opium acts as a diuretic, and would thus promote the elimination of the poison from the body.

On the 14th day of May, 1862, shortly after noon, Mrs. I. L. P., about 30 years old, having had some difficulty with her husband, over which they separated, became tired of life and attempted to end it by swallowing an ounce of officinal laudanum. The act was discovered immediately, and I was called within an hour. The evidence of her having swallowed the ounce, appeared to be clear: but she was awake, and seemed to have the full use of her intellect; told friends how she wished them to dispose of her affairs, and appeared to be as certain of dying as she could possibly be. She absolutely refused to take the least thing.

I immediately called in my friend, Dr. L. H. Allen, and we thought the probability was, that her stomach would respond to the use of emetics, and by force we compelled her to take ipecac. and sulphate of zinc, and pulverized mustard seed profusely; but it failed us entirely, and she became insensible astonishingly soon. I went to my office for the stomach-pump, a distance of about thirty rods, as quickly as I could, and we succeeded without any trouble in clearing the stomach of its contents, which was loaded with the odor of laudanum. With a pitcher and tunnel we put down a quart of lukewarm water, and after a few minutes removed that, and put down another quart, which we also removed in a short time, and then we put down about a pint of infusion of coffee, and afterwards let her alone.

We were prepared to make use of artificial respiration if necessary, but before the next morning the narcotism began to subside, and within twenty-four hours she was very well over it.

Now I do not believe that this patient would have recovered, if we had visited her with such a dispensation of prostrating and breaking down exercise, as it is the habit of some to practise in these cases.

Very truly, &c.,

Owego, N. Y., Feb. 15*th*, 1864. E. Daniels.

Chalk Paint for Burns.—*Messrs. Editors,*—Noting an article on page 101, Part xlvii., of *Braithwaite's Retrospect*, on "Burns," I determined to make trial of the remedy there spoken of, and, Tuesday, February 9th, the opportunity presented. A little girl about 6 years of age, the child of Mr. George W. Tillinghast, of Valley Falls, R. I., having been left alone for a few moments, got its clothes on fire, and before they could be removed, which was finally effected in the open air, it was frightfully burned about the chest, neck, back, and both its arms and hands. Three hours had elapsed after the accident before I saw it, during which time a kind neighbor had tenderly held it, occasionally applying olive oil, which afforded partial relief. I procured linseed oil and mixed it with common chalk, grated fine, so as to form a thick paint, and added one quarter as much vinegar as I had used of the oil, and applied with a cloth swab. Immediate and complete relief followed. The burn, the exposure to the open air, and the three hours of great suffering produced such deep collapse, however, that no effort of rallying occurred, and death took place in nine hours afterwards. This remedy forms a perfect cover, and thereby excludes the air, which the oil and lime-water will not accomplish. What special virtue there is in the chemical action produced by the addition of vinegar, I will leave for others to speculate upon; but certain it is that nothing which I ever used or saw used, can compare with it in affording relief. If linseed oil were not at hand I should use olive oil or melted lard, and if the latter, probably the best mode of application would be to spread it upon strips of calico and cover the injured parts with them. James O. Whitney, M.D.

Pawtucket, R. I., Feb. 17*th*, 1864.

When we consider how appropriate a theme the sufferings of Homer and Milton might have furnished some New York Bard, we wonder much that the poet was not asked to contribute his share also to the varied nature of the entertainment provided on the occasion of the twelfth commencement of the New York Ophthalmic School and Hospital, on the evening of February 29th. We commend the following programme to the notice of heads of faculties and students of ophthalmic surgery:—

Programme.

Overture. "La Syrenne." - - - - - - - - - - *Auber.*

Prayer.

Music. Selections from "Les Vespres Siciliennes." - - - - *Verdi.*

Introductory Remarks, - - - - - - *by Solomon Jenner, A.M.*
President of the Institution.

Music. "Il Bacio." Waltz. - - - - - - - - - - *Arditi.*

Presentation of Diplomas to the Graduating Class.

Music. Selections from "Un Ballo in Maschera." - - - - *Verdi.*

Charge to Graduates. - - - - - *by Marcus P. Stevenson, M.D.,*
Attending Surgeon and Lecturer on Ophthalmic Medicine and Surgery.

MUSIC. Galop, "Frisches Leben." - - - - - - - - *Zubel.*
ANNOUNCEMENT OF PRIZES.
MUSIC. Selections from "Maritana," - - - - - - - *Wallace.*
VALEDICTORY ADDRESS, - - - - - *by George G. Needham, A.B.,*
Of the Graduating Class.
MUSIC. Polka. "Myrthen." - - - - - - - - *Conradi.*
BENEDICTION.
MUSIC. - - - - - - - - - - - *National Airs.*

HARVEY B. DODWORTH,
Musical Director.

MASSACHUSETTS MEDICAL COLLEGE.—The Annual Commencement for the conferring of medical degrees, will take place at the College on Wednesday, March 9th. The exercises will commence at 11 o'clock, A.M., with a prayer by President Hill, after which graduates will read selections from their dissertations. The degrees will then be conferred by the President, and the whole will conclude with an address by His Excellency Gov. Andrew.

The Corporation and Board of Overseers of the University will be present on the occasion, and the Fellows of the Massachusetts Medical Society, all medical students, and all persons who may be interested in medical science, are hereby respectfully invited to be present.

D. HUMPHREYS STORER, M.D.,
Dean of the Medical Faculty.

Wednesday, March 2, 1864.

SUCCESSFUL CASE OF OVARIOTOMY.—We would call attention to Dr. Clark's interesting case of ovariotomy, printed in this week's number. It is, we believe, the first successful case that any Boston surgeon has had.

DR. ALGERNON COOLIDGE has been elected by the Trustees of the Massachusetts General Hospital, Surgeon to Out-patients of that Institution.

DEATHS IN BOSTON for the week ending Saturday noon, Feb. 27th, 96. Males, 49—Females, 47.—Accident, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 6—consumption, 16—convulsions, 4—croup, 4—cyanosis, 1—diarrhœa, 1—diphtheria, 6—dropsy, 5—dropsy of the brain, 2—scarlet fever, 10—disease of the heart, 2—infantile disease, 1—intemperance, 1—intussusception, 1—congestion of the lungs, 2—inflammation of the lungs, 11—old age, 2—paralysis, 1—pleurisy, 1—premature birth, 2—puerperal disease, 1—purpura, 2—scrofula, 3—small-pox, 1—unknown, 3—rupture of the uterus, 1.

Under 5 years, 38—between 5 and 20 years, 13—between 20 and 40 years, 18—between 40 and 60 years, 13—above 60 years, 14. Born in the United States, 67—Ireland, 25—other places, 4.

[Re-printed, at the office of the Medical and Surgical Journal, Nov., 1865.]

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXX. THURSDAY, MARCH 10, 1864. NO. 6.

TWO CASES OF LITHOTOMY IN YOUNG PERSONS, WITH REMARKS UPON OPERATIONS FOR STONE IN THE BLADDER.

BY J. MASON WARREN, M.D., BOSTON.

[Reported to the Boston Society for Medical Improvement, April, 1863, and communicated for the Boston Medical and Surgical Journal.]

THE first of these cases illustrates the ordinary bi-lateral operation of Dupuytren, and may serve to compare this method with that adopted in the second case, where the primary incisions were novel, but the final ones identical with those of Dupuytren.

CASE I.—Thomas Curly, 12 years old, had been troubled for two or three years with a want of power to retain his urine, which until very lately had been attended by excessive suffering both by day and night. His condition was very miserable, and he was much emaciated; his sufferings, however, had been mitigated during the last few weeks, a fact which was afterwards explained by finding the stone fixed in the upper part of the bladder. The prepuce was very long, owing to the habit of constantly pulling at it. On sounding him, under ether, the stone was felt in the upper part of the bladder, where it appeared to be attached to the wall of the organ, and seemed partially buried in the folds of mucous membrane. It was decided to perform lithotomy, which was done by the bi-lateral method of Dupuytren. A sound of good size was introduced, making a great curve outward, so as to project well in the perinæum. A semilunar incision was then made above the anus, and the staff reached at the membranous portion of the urethra. Dupuytren's double lithotome was now passed into the bladder, with its concavity upwards, and the sound being removed, the instrument was reversed, its blades opened to the extent of seven eighths of an inch, and withdrawn. The forceps were now introduced, the finger having previously been used to explore the stone, which was found firmly adherent to the upper part of the bladder. The stone was seized with some difficulty, owing to the firm adhesions which it had contracted with the folds of the mucous membrane, but it was finally extracted without injury to the organ. It proved to be a mulberry calculus, very rough and irregular in outline, and weighing about three drachms. A bit of elastic catheter was kept in the wound for twenty-four hours, after which it was dispensed with. On the third day a little water was passed by the urethra, and on the tenth day it had entirely resumed its natural channel. All the distressing symptoms of stone were immediately relieved by the operation, and at the end of three weeks the patient was discharged well.

Case II.—Jacob Banks, 13 years old, from Amesbury, Mass., entered the Hospital in March, 1863, on account of great suffering in the region of the bladder, accompanied by incontinence of urine. Two years before, he noticed an occasional difficulty in passing water; at times a sudden stoppage of the stream occurred, and the urine was now and then a little bloody. Of late the symptoms had become more urgent, and the pain constant, so as to confine him to his bed. At this time the urine dribbled away, and the skin of the penis, scrotum and thighs had become red and irritated by it. The prepuce, as in the last case, was much elongated.

On introducing a sound, the instrument encountered much resistance at the neck of the bladder, and at once came in contact with a stone. The bladder was quite empty of urine, and the calculus meeting the sound at different points, while enveloped in the mucous folds, gave the impression of the existence of two or more stones.

It was decided to perform lithotomy, first relieving the external irritation by cleanliness and suitable dressings, and then evacuating the bowels by a dose of castor oil, followed by an enema, on the morning fixed for the operation.

The operation which was performed combined some of the more important features both of the median and bi-lateral methods, and seems to offer some advantages over either. A sound of medium size was passed into the bladder, the meatus urinarius, which had become very much contracted, being first slightly enlarged by the knife. The skin was then divided in the median raphé, and the dissection continued in the same line until the membranous part of the urethra was exposed. This was next opened, and the attempt made to introduce the double "lithotome caché" of Dupuytren. Owing to the unyielding condition of the neck of the bladder, the lithotome could not readily be passed in; a probe-pointed bistoury was therefore substituted for it, and the prostate divided on both sides. The finger now entered with ease, and a large stone was felt very high up in the bladder. Attempts were made to extract it with a long pair of polypus forceps, and then with the ordinary lithotomy forceps, but without success, owing to the great size of the stone; the cut in the prostate was therefore enlarged, and the attempts at extraction renewed, but still unsuccessfully. As it was not deemed safe to enlarge the incision in the prostate further with the knife, the two forefingers were introduced, back to back, and the substance of the gland slightly torn. A larger pair of forceps was then passed in, and by embracing the whole stone within its jaws it was extracted without further difficulty. A bit of catheter was placed in the wound, and the patient sent back to bed.

On the ninth day the urine began to pass through the urethra, and from the twelfth day none escaped by the wound. At the end of three weeks the patient was discharged, with the external wound nearly healed, and free from all symptoms of stone.

The calculus, which appeared to be composed of the triple phosphate of magnesia and ammonia, was large and very rough; it measured 3½ inches in its longest circumference, and 2¾ in the shortest; its weight was half an ounce.

Dr. W. said that he was led to perform the operation in the manner related, viz., by making an incision through the skin in the median raphé, instead of the cross cut, employed by Dupuytren, as illustrated in the first case, from having observed how easily these parts could be dilated in the incisions practised in perineal section for the division of strictures, in some cases impassable by the smallest sound. In these cases, after cutting through a deep perinæum filled with inflammatory exudation, it is often found necessary to exercise much patience and to spend much time in tracing the urethra beyond the stricture. Having had occasion, during the past few years, to do a number of these operations, most of them entirely without any guide, he was led to the reflection that it would be very easy in this way to perform the operation of lithotomy when the operator is guided by the presence of a large staff in the urethra. When the operation by this median section is performed deliberately, the operator has the parts divided freely open to the view, which is not the case in Dupuytren's operation, which has to be performed mainly by the sense of touch. By this method, also, the vessels are much less likely to be wounded than in the common operation. Although different kinds of operations must of necessity be practised to suit different cases, the present method would seem to be the most direct and natural one for arriving at the bladder. Since performing it, Dr. W. said he had found that a similar operation had been suggested by Mr. Erichsen, who had not, however, performed it upon the living subject. Mr. Allarton's and Mr. Beaumont's operations, although done in the median line, are essentially different.

Dr. W. stated that he had now operated upon about thirty cases of stone in the bladder, and thus far had been so fortunate as not to lose a single patient. Most of the operations had been done by the crushing method, which he had found applicable to all cases except in very young persons; the oxalate of lime, or "mulberry calculus," when in an adult patient, and of a moderate size, not being an objection on account of its hardness. In young subjects, on account of the small size of the urethra, the danger of its obstruction by fragments, and the comparative safety of lithotomy, he had generally performed lithotomy by the bi-lateral section, and the recoveries, without exception, have been safe and speedy. The operations of late years had, for some reason or other, increased in Boston, and he had now on an average about three in the course of the year, operations for stone being also done by other surgeons, whereas fifteen years ago the whole number of cases done in Boston did not amount to more than three in two years. As regards the chemical character of the stones, the greater part were composed of uric acid; next to this comes the triple phosphate of magnesia and ammonia, and he had met with one case of "cystic oxide."

As to the operation of lithotrity, he considered it a perfectly safe one, if done with discrimination and with proper delicacy of manipulation; he had often done it at his own house without more inconvenience to the patient than in an ordinary case of catheterism. Care should be always taken not to move the instrument too much about in the bladder for the purpose of exploration. By sinking the beak of the lithotrite into the fundus of the bladder, opening it, and giving it a slight vibratory motion, the stone will generally fall between its jaws. It should then be raised to the middle of the cavity of the bladder, to make sure that the mucous membrane is not engaged, and the stone crushed by turning the handle. This operation may be once or twice repeated, but no more than five minutes should be occupied by the whole operation. The fragments are very apt not to come away before the third day, the bladder apparently not immediately regaining its full power for the expulsion of its contents. Generally speaking, he had not operated oftener than once a week, but in some few cases, where there has been but little irritability, it may be possible to operate twice in the same period. In 1849, Dr. W. had published a paper in the *American Journal of the Medical Sciences,* on the advantages of the use of ether in crushing operations; previous to that time it had been thought unsafe to manœuvre the lithotrite in the bladder without the warning given by the sensations of the patient, for fear of involving the mucous membrane in the jaws of the instrument. In some cases, however, it was found that the bladder was so irritable as to render it impossible to work the instrument until the patient had been etherized, and in others concealed calculi which had been firmly grasped by the coats of the bladder were completely unmasked by the relaxation caused by the use of this agent. Civiale, it is understood, for some reason or other, objects to the use of anæsthetics. It is a remarkable fact that these patients require very large doses of ether to bring them sufficiently under its influence to annul the contraction of the bladder, and render the operation easy.

PUERPERAL ENTERITIS.

[Read before the Boston Society for Medical Observation, Feb. 1st, 1864, and communicated for the Boston Medical and Surgical Journal.]

By S. H. Carney, M.D., Boston.

Rokitansky speaks of puerperal inflammations as always commencing in the "shape of an exudative process affecting that portion of the uterus to which the placenta had been attached," and that "metro-phlebitis supervenes upon, and is induced by the exudative process." "Uterine phlebitis is generally," he says, "a primary affection originating in the open mouths of the veins at the insertion of the placenta, and caused as well by their laceration as by contact with the external atmosphere, with the traumatic secretion of the part and with the product of exudation on the internal surface of the uterus."

Should pus be formed and be absorbed into the circulation, a train of symptoms follows, many of them destructive to life in themselves, unless relieved by nature or art.

Puerperal enteritis is frequently met with, occurring a short time before confinement and often inducing it, but is rarely seen after as the prominent symptom of puerperal fever. Few authors have deemed it of sufficient importance to make any extended remarks upon it; indeed, by far the largest number omit to notice it as one form of puerperal fever. That it is unaccompanied with peritonitis, I am unable to say, but am inclined to think that should the uterine inflammation not be very deep and not extend through the Fallopian tubes, the peritoneum might escape, and still the whole system be affected by the absorption of purulent matter formed in the uterine veins, and finally be eliminated by the mucous membrane of the intestinal canal. It does not seem probable to me that that form of puerperal enteritis coming on previous to confinement is the result of purulent infection, but that it is the result of congestion of the intestinal vessels, either caused by the pressure of the gravid uterus or by the irritation produced by an accumulation of impacted fæces; the latter cause, produced by the former, is undoubtedly the more important, especially when we consider how frequent constipation is towards the end of pregnancy.

Puerperal enteritis occurring after delivery may have for its primary cause the same condition of the intestines that is noticed previously, or it may be the result of an attempt on the part of nature to throw off the *materies morbi* from the system. It is by far the more serious affection, as it indicates purulent absorption from an inflamed uterus.

Ramsbotham, Churchill, Gooch, Meigs, Bedford, make no mention of either affection. In *Braithwaite's Retrospect*, part viii., p. 166, it is mentioned that Dr. Oke reports two cases of puerperal diarrhœa treated successfully by acetate of lead and opium, but does not indicate which form of the disease he met with. Dr. R. U. West, in a book entitled "Illustrations of Puerperal Diseases," gives the history of 78 cases under the head of puerperal fevers, in which diarrhœa was a more or less prominent symptom in 22 cases; and of 23 cases under the head of non-febrile diseases, in which diarrhœa occurred but in one. In his remarks upon one case, in which peritonitis appeared six weeks before delivery and diarrhœa supervened immediately after, he says, "The substitution of diarrhœa for peritonitis after the labor, I consider a remarkable fact. The puerperal disease in the case was diarrhœa, and yet we have been taught to regard peritonitis, for which the diarrhœa was substituted, as the *beau ideal* of puerperal fever."

The case which I now present is one of interest, inasmuch as the disease was undoubtedly puerperal fever, the mucous membrane of the intestines being the seat of the disease, and the part from which subsequently the morbid products of the blood were thrown off. It also shows the danger likely to result to a woman in labor who is attended by an ignorant midwife or nurse, from too early exposure to atmospheric changes and from fatigue. If such an accident should happen as the retention of the placenta, the danger is greatly augmented. I think the majority of cases of puerperal fever are due to the carelessness of nurses and attendants and their great anxiety to have their patients make a quick recovery. In the present case, the primary cause of this patient's illness was owing to exposure and fatigue so soon after delivery. It is also certain that her disease was very soon aggravated by the decomposition of the retained mass of placenta and the purulent absorption that took place.

The importance of examining the placenta *in every case of labor*, to see if any portion has become detached, is also suggested. I have had two cases where a small part was retained, and then removed, although the mass was expelled by the uterine and vaginal contractions alone.

Several months since, I was called to see Mrs. R., who had two weeks previously been delivered of twins under the care of a midwife. Her labor, which was the second one, was easy and of short duration, so I was informed. An hour or two after delivery, which took place at night, the woman in attendance had her get up into a chair while the soiled clothes were removed and the bed changed. Soon after returning to bed, she was seized with a chill which lasted an hour or more, after which she became comparatively easy. In the morning was quite feverish—had quite a profuse diarrhœa, which was pronounced "all right." In order that she might recover her strength sufficiently to suit her nurse, she was advised to sit up during the day. She was in the chair about two hours, during which time her hair was dressed and clothes changed. The next day, becoming more feverish, and the diarrhœa increasing, her husband called a physician, although earnestly urged by the midwife not to "get frightened," as all would "turn out well." The physician attended her during the next week, when I took charge of the case. She had taken chalk mixture and laudanum several times each day. At my first visit, I found her very pale; lying on back; countenance anxious; pulse 140; skin hot and dry; tongue dry, swollen, cracked and bleeding when touched; sordes on teeth. She complained of pain in the abdomen, with frequent desire to go to stool. No tenesmus. Abdomen not distended, but soft. Deep pressure, though gentle, produced pain. I was informed by her mother that she had had from twenty to thirty discharges in the twenty-four hours. Evacuations dark colored and very offensive. No blood. Urine scanty and high colored. The following was directed to be given every two hours:—℞. Plumbi subacet., gr. i.; pulv. opii, gr. ½. M. Also an enema of starch (℥ i.) and tincture of opium (gtt. xxx.) after every second dejection. Fomentations to abdomen. Owing to the irritability of the stomach, which rejected almost everything, I advised the use of milk and lime-water, equal parts, which relieved the nausea and vomiting, and also refreshed her. On the second day, diarrhœa still continuing profuse, although somewhat diminished, and the patient quite exhausted, not only from the discharges but from sleeplessness, I directed pills to be given every hour, and to take as much port wine as she could bear. In the evening, reports, "feels better." One dejection since morning. Pulse 104.

The next (3d) morning, I found her much worse. Dejections had increased in quantity and frequency. Pulse 128. Lochia still continue; noticed as offensive. Omitted pills, and directed her to take one drachm of the following mixture after every second operation. ℞. Muc. acaciæ, ℥ i.; acidi gallici, ℈ ii.; morph. sulphatis, gr. ii. M. Was comfortable at night.

The next day (4th), pulse 108; one dejection in last twenty-four hours.

On the 5th day, directed enema to be given after every dejection. In the evening, report was that she had slept much during the day, and had had seven dejections.

6th day.—Dejections more solid; pulse 120; more sordes on teeth.

7th day.—Two small dejections, quite solid; tongue quite moist, but still without fur or papillæ.

8th day.—No dejection. Omitted medicine.

9th day, the 23d since her confinement, expelled a portion of placenta, about 1½ by 2½ inches. Had two slight dejections this day.

From this time the diarrhœa ceased to be troublesome or difficult to control.

10th day.—Complained of pain in right infra-maxillary region, attended, in a few hours, by swelling of parotid of that side. In the course of twelve hours the gland had enlarged enormously, rendering it extremely painful to swallow. Patient very feeble. Pulse 136. Directed her to have one grain of sulphate of quinine three times a day, with increase of stimulant. In five days a large quantity of pus was discharged, the abscess having opened into the meatus auditorius.

24th day.—A mammary abscess, which she had not known to exist, was broken by her laying her hand quite heavily upon her breast. The very fœtid odor of the discharge first called her attention to it. For several days had been very feeble, and was annoyed by vomiting, which occurred at a certain hour each day, whether food had been taken or not. This symptom was so distressing and persistent as to cause much anxiety as to her recovery. The following was used with marked relief:—℞. Pulv. colombæ, gr. vi.; ferri subcarb., gr. i. M. 3 t. d.

From this time she began to gain strength; both abscesses healed speedily, and in the course of a month she was fully restored to health. She is now perfectly well, and several months advanced in pregnancy.

ON THE ANTIPHLOGISTIC METHOD OF TREATMENT.

By Henry Veale, Assistant Surgeon, Royal Artillery.

(Concluded from p. 103.)

Apart, however, from all theories as to the nature of inflammation, the practical question, "Whether the abstraction of blood in whole or in part opposes the process of inflammation," has yet to be considered. The advocates of the practice assert that nearly all the medical authorities, from the earliest times until the present, have treated acute inflammation by such means, and have approved of doing so; and this answer would seem almost sufficient to place the matter beyond a doubt; for it is not likely that the medical practitioners of all ages and of all countries should have been mistaken in supposing that bleeding afforded relief to their patients when suffering from acute inflammation. It is still less likely that those who have had experience of the remedy in their own persons should have been deceived as to the nature of their own sensations. In face of all the evidence on this point, I think it is impossible to deny that inflammation may sometimes be cured by bleeding. The theories that have prevailed at different times concerning its mode of action may have been erroneous, but the fact remains, and has yet to be explained.

That the curative effect of the remedy is not attributable to the removal of the corpuscular elements of the blood, nor of the fibrine, nor of its other constituents taken separately, has been sufficiently proved by the recearches of Andral and Gavaret, Becquerel and Rodier, by Todd, Bennett, and others; and we are therefore led to inquire, whether the effect is attributable to the loss of blood *per se*, or whether there may not be some other element in the case which requires to be taken into consideration. Before entering directly upon this inquiry, however, I must beg to make a brief digression.

A riddle always appears a wonderfully simple thing when its solution has once been learnt, and so does any mystery of nature seem to be *after* it has been interpreted to us. What is there, for instance, more easily intelligible now than the law of gravitation, or than that of the correlation of forces? What more simple than the leaf-theory of Goethe, or more obvious than the circulation of the blood? And yet, for ages upon ages, men remained in ignorance concerning these matters, although constantly endeavoring to discover the truth. Now that we have learnt to admit that nature and not the physician cures disease as a general rule, we have devoted ourselves with more assiduity to the observation of her processes; and we are gradually coming to the belief that, for the cure of the vast majority of our ailments, we have only to allow nature to work without impediment. At first sight this may seem a very easy task to perform, but it is not so in practice, because infinitely more skill and more accurate observation are required *not* to interfere with the curative efforts of nature than to become proficient in all the complications of any system ever yet propounded by man. We are only just now beginning, after centuries of distrust, to believe that nature's plan for the treatment of inflammations is generally the best, and that if we second her efforts in an intelligent manner, we adopt the safest course for our patients.

It frequently happens that we may see a law or a plan of nature more clearly manifested in the actions of the inferior animals than in those of man himself. It would almost appear as if the instinct of self-preservation were more forcibly developed in them than in ourselves. With all our "boasted civilization," and all our recent progress in sanitary science, we cannot yet place ourselves on an equality in hygienic matters with our horses, our dogs, or our cats. These, like all other animals, are liable to inflammation, which we may observe in its simplest form when it occurs as the result of external injury; and what is it we find that nature prompts an animal to do when it has sustained a serious hurt which inflammation must follow? In the first place, it withdraws itself from the society of its fellows; it gives itself absolute repose both of the injured part and of the whole body; it abstains from food, but not often from drink; and if the wound be accessible, it licks the part constantly with its tongue. Observe the extreme care shown by dogs of the greatest pluck, dogs that have seemed almost insensible to pain whilst engaged in fighting—observe the care they take afterwards not to move or to use the injured and inflamed limb, and then mark the wonderful rapidity with which their wounds heal. There is no depletion in these cases; there is nothing but the absolute rest which their seclusion, in whatever lair they may have found, gives to their nervous, muscular, and nutritive functions, as well as to the part itself. Probably, if man were to obey his instinct only when he had sustained a serious injury, he would act in a somewhat similar manner; but the solicitude of his friends and neighbors, and eventually his own excitable thinking faculty, are generally more than sufficient to overrule his instinct.

When once we have obtained a clear conception of the work we ought to do, we have already advanced a long way towards its accomplishment. The removal of the obstacles that intercepted our mental vision renders the task comparatively easy. As soon as we understand that our object in the treatment of acute inflammations should be not to exert a "sedative influence on the heart and arteries," not to render the blood less plastic—"less stimulating," as the phrase went, not "to cut off the supply of blood from the inflamed part," not to "empty its gorged capillaries," nor even to make way for the speedier operations of our mercurials and antimonials and cathartics, but simply to imitate nature's method, and suspend the functional activity of the oppressed part, then the means of doing so increase exactly in proportion to our knowledge of what its functions are. This would seem to be the true rational medicine, having its basis on a correct interpretation of nature's mysteries: in other words, on physiological science.

In the management of any acute inflammatory disease, from the smallest boil to the gravest inflammation of the heart, the lungs, or the brain, we find that nature is consistent in her plan. For all she prescribes *rest,* which she varies only in degree. The loss of appetite which so constantly attends acute inflammation, and which has often been supposed to be an indication for depletion held out by nature herself, I think we ought to regard as the strongest manifestation that she requires rest for a time, even from the task of converting food into blood. The danger to life would seem to be so great in such cases, that all her *disposable* forces, all her *vis in esse,* are summoned into the citadel, as it were, to guard it from the enemy who is seeking to obtain an entrance there. By and by, when she shall have gathered up all her *radical* strength, all her *vis in posse,* and the enemy shall have been thereby overcome, she will not fail to occupy her outposts again. The *pain* of inflammation is also to be considered as a signal for rest. Pain seems to be the means which nature employs in order to enforce the suspension of functional activity in an inflamed part; and the circumstance is sufficiently remarkable, that the pain of inflammation is generally most severe in those parts where rest is most easily obtainable. There is not much pain, for instance, in pure bronchitis or in pure pneumonia, and we know that the action of the lungs cannot be arrested for more than a very brief period without death as the result; but in pleurisy there is often intense pain, and the parts concerned in this case do admit of their functional activity being diminished. An inflamed joint, an inflamed bone, an inflamed finger, or an inflamed eye, are all intensely painful, and pain in all these cases leads to functional rest; but an inflamed liver, an inflamed kidney, and notably an inflamed heart, are not very painful, and in them we find that pain would not obtain rest. The pain of peritonitis and enteritis, again, does necessitate rest, and inasmuch as it does so, it serves a useful purpose; but then in treatment we must remember that "pain kills," it exhausts the vital force; and therefore our object should be to assuage it certainly, but to do so in such a way that the functional activity of the oppressed part may still be kept in abeyance. Opiates answer this twofold purpose, but it is necessary that they should be given in much larger doses than are usually employed. In the treatment of injuries sustained on the battlefield especially, I can assert, from a sufficient experience, that their employment in this way is absolutely indispensable.

Returning now from this digression, we may resume the inquiry, whether the beneficial results of bloodletting are produced directly or indirectly; whether, in fact, it is the loss of blood that affords relief, or whether loss of blood is only a means of developing the conditions for obtaining it.

This question is by no means so easily answered as might at first be supposed; because, in almost all instances where depletion is effected, rest of the inflamed part, *i. e.*, a suspension of its functional activity, more or less complete, is also obtained. If it were possible for active depletion to be made without enforcing thereby a greater or less degree of this suspension of functional activity, the crucial test could easily be applied; but this not being so, we can only reason from probabilities. That the actual abstraction of blood is not essential may be inferred from the case reported by Dr. M. Solon, and quoted by Dr. Watson, of erysipelas cured by a succession of fainting fits, without the loss of a single drop of that fluid; and I think it may be safely asserted, on the other hand, that loss of blood, without a suspension of functional activity in the part, would prove of little value. Let a man have a traumatic inflammation of the integument of his arm, for example, and let him, through sheer force of his will, continue to use the limb, and thereby to enforce the functional activity of the inflamed area, and I think it will be generally admitted that no depletion which did not necessitate rest would cause the inflammation to subside. Then, again, all observers agree in stating that bleeding, to prove effectual in the cure of inflammation, depends more upon the manner in which it is effected than on the absolute quantity of blood taken away. The blood was to be drawn *pleno rivo,* the patient being in an erect or sitting posture. As Dr. Watson says, "If you neglect these small matters, and make an insignificant slit in the vein, and suffer your patient to lie down whilst you are bleeding him, you will be obliged to take much more blood in the end; or you may drain him of his blood and of strength by repeated bleedings of this sort, and make no impression after all on the disease."

I have already expressed myself ready to believe the statements of the older physicians, as to the relief which bleeding sometimes afforded, and I see no reason to suppose that similar results might not be obtained in the present day. There is no necessity to deny the facts as some have done, or to attempt to explain them away as others have sought to do, if we admit that loss of blood causes a diminution or suspension of the functional activity of an inflamed part; and that it is capable of effecting either may, I think, be easily proved. "You see a person," says Mr. Lawrence, "with his eye bright red and very painful; he cannot face the light, and tears gush out with great suffering if he attempt to do so. You bleed to fainting, and immediately the capillaries are emptied, so that the organ resumes its natural paleness; the pain is gone, the eye is opened without difficulty, and the full influx of light can be borne without an uneasy sensation. For a time the part has passed from inflammation to a nearly natural state." But notwithstanding this relief the inflammation is probably far from being cured, for all the symptoms are only too likely to recur as soon as the circulation is restored. The rest afforded by the bleeding has not lasted long enough to allow of the nutritive activity recovering its proper balance. In some cases, it might happen that a single bleeding would give a sufficient rest to admit of recovery taking place; but in the majority it would be necessary to repeat the venesection; and oftentimes, according to the old expression, such a repetition would either "*kill or cure.*" Therein lay the danger, and the question arises, Does bleeding afford the best means of obtaining the rest that is required? Formerly it may have been, and probably was, the best, because it was the only one known; but now-a-days the case is altered. Knowing what we now know of the inflammatory process, knowing that it requires a well-conditioned blood for its satisfactory evolution, and that "the excitement of the circulatory system, the rapid and bounding pulse," "the redness, the swelling, and the heightened sensibility"—all betoken diminished and not increased vital power; knowing all this, must we not ask ourselves, whether in abstracting not only so much by weight of the circulating fluid—the "liquid flesh," as it has been called, but the richest and most highly elaborated part of it—we are not paying too high a price for the benefit we expect to receive? Granting that we find it absolutely necessary to give rest to the laboring heart, lung, or liver, have we no other means of doing so than the abstraction of the *pabulum vitæ* itself?

The answer must now be made in the affirmative; for we have not only means as certain, but even more effectual and infinitely safer. Their action may not be so speedy, but they are less costly;

and "slow but sure" is a quality far preferable in this case to the brilliant but uncertain.

Let us now consider and contrast the two methods of treating a case of acute inflammation—of simple pneumonia, for example.

According to the ancient method the means employed were—

1*st*, *Bleeding:* the effects of which were a temporary rest or suspension of functional activity, both of the inflamed part and more or less of the whole body, but at the same time, a deterioration of the blood and a diminution of the vital power, which the occurrence of the inflammation had of itself shown to be already seriously impaired.

2*d*, *The administration of mercury:* which still further impoverished the blood, and thereby depressed the vital power, without any compensation whatever in the way of rest.

3*d*, *The use of antimonials:* these afforded rest, but only at the cost of producing nausea and depressing the vital power. When given as sudorifics they perhaps acted more beneficially, as we shall see in the sequel; but they were very rarely indeed prescribed with this object only.

4*th*, *Purging:* this, according to the extent to which it was carried, impaired the quality of the blood, lowered the powers of life, and over-exerted the body, instead of affording rest to it. It must, however, be stated, in justice to our immediate predecessors, that they had themselves recognized, if not the injurious effects, at least the inutility of purgation as a curative means.

5*th*, *Prolonged abstinence from all kinds of nutritive food or stimuli*—a measure that necessitated rest truly, but at the same time compelled the body to live on itself, as it were, and thereby maintained and tended to increase the depression of the vital powers.

6*th*, *Local depletion*, by cupping and leeching, producing effects differing only in degree from those of general depletion.

7*th*, *Counter irritation*, by blisters and rubefacients, sometimes perhaps proving beneficial, but generally quite inadequate to change the action of an acutely inflamed part; and in such cases becoming hurtful, by deteriorating the quality of the blood, and by exhausting the nervous system through pain.

There can be no reason to doubt that this method of treating inflammation was often enough successful, when carefully employed, to justify the belief that even recourse to it was better than no treatment at all; and there is every probability, I think, that if still adopted the results would be the same; but there is this source of danger inherent in the whole system, that its tendency is to diminish the powers of life, and to *kill* if it does not *cure*. Such a reflection should make us pause ere we sanction the use of such deadly two-edged weapons. Very few persons, indeed, could wield them with the nicety and dexterity necessary to do good; whilst the majority of us would be almost sure to strike beyond the mark, and to do harm instead.

Happily, a safer and more rational treatment is gradually but steadily gaining ground; but, in order to understand its application in any given case, we have first to determine what the functions are to which we propose to give rest.

Now the chief offices of the lungs are—1*st,* To supply oxygen to the blood; 2*d,* To remove carbonic acid from it; 3*d,* To exhale watery vapor more or less charged with animal matter.

The demand for oxygen and the quantity of carbonic acid requiring to be exhaled bear a direct proportion (*a*) to the degree of nutritive and formative activity in the tissues generally, (*b*) to the amount of functional activity of the nervous and muscular systems especially, and (*c*) to the greater or less necessity for maintaining the heat of the body by the internal combustion of carbon and hydrogen. Consequently, if we could "fix the state of nutrition," or retard the process of decomposition in the body, suspend all its nervous and muscular actions, and render unnecessary the maintenance of its heat by the process of internal combustion, we should give the lungs absolute rest, and place them in the conditions most favorable for recovery when inflamed; but unfortunately we have no certainty of being able to arrest the process of nutrition, without producing an injurious effect on the vital powers. So long as life remains, this process must be carried on; and as the presence of oxygen is indispensable for its performance, and as this gas enters the body almost entirely through the lungs, absolute rest of these organs during life is impossible. Still, to whatever extent we can succeed in reducing the consumption of oxygen in the body, to the same degree we can suspend their functional activity; and as a general rule it may be affirmed, that the causes which bring about a diminished elimination of carbonic acid are a measure of those which render a smaller supply of oxygen necessary. The effect of a high temperature of the air in reducing the functional activity of the lungs may be presumed from the immunity from pulmonary diseases enjoyed by the inhabitants of tropical countries; and its influence in diminishing the exhalation of carbonic acid has been shown by Vierordt to be so great, that between 38° F. and 75° F. the human subject experiences for every rise of 10° F. a decrease of two cubic inches per minute in the quantity exhaled. A dry state of the atmosphere also seems to cause a diminution in the rate of exhalation of carbonic acid. Thus Lehmann has shown, that "while one thousand grammes' weight of rabbits exhaled in *dry* air 0·451 gramme per hour at a temperature of 100°, they exhaled as much as 0·677 in a *moist* atmosphere at the same temperature."

Absolute repose of the muscular and nervous systems, sleep, abstinence from solid animal or farinaceous food, and, contrary to what might have been expected, the use of alcoholic drinks under certain circumstances, also diminish the exhalation of carbonic acid; whilst their opposites, viz., exercise, either of the mind or body, want of sleep, a diet of animal or farinaceous substances, &c., tend to increase it. Again, it is a well-ascertained fact, that the lungs, and the skin especially, are able to supplement each other to a considerable degree: and that the kidneys, the liver, and the intestinal canal, are also capable, more or less, of performing the functions which, under normal conditions, are performed almost solely by the lungs; and it is reasonable to suppose that the more active these organs are within certain limits, the less must be the amount of work required to be performed by the lungs.

Keeping in view, then, the two principles here indicated, viz., the reduction of the special function of the lungs to the lowest point compatible with the performance of the processes of life, and the substitution, as far as possible, of its subordinate functions by an increased activity of the skin, the liver, the kidneys, and the intestinal tract, we may, by the adoption of these two plans, and by their judicious combination, succeed in giving to an inflamed lung that amount of rest which is necessary for the process of recovery. Indeed, the fact is indisputable, that by this method, properly carried out, we actually do succeed in rendering pneumonia a much less fatal disease than it used to be when phlebotomy and a general depletion were the measures commonly resorted to, or than it is even now found to be when treated by such means.

The correct treatment of acute inflammation of the lungs, then, consists in maintaining:—

1*st*, *A uniformly high temperature in the ward or sickroom* (say from 70° F. to 80° F.), and *as dry and pure a state of the atmosphere as possible.*

2*d*, *Absolute rest of mind and body*—to ensure which the administration of narcotics and anodynes in large doses will often be found necessary.

3*d*, *Abstinence from animal and farinaceous food.*

4*th*, *The ingestion of cooling drinks,* saline or acidulous, according to the case and the desire of the patient.

5*th*, *The use of remedies that tend to increase the functional activity of the skin, kidneys, liver and bowels*—for which purpose the acetate of ammonia will generally prove sufficient, but a cholagogue cathartic may occasionally be required in addition, if the tendency to constipation be greater than usual.

6*th*, At no very long period after the establishment of the disease, two or three days at most, *the use of wine,* at first diluted and in small quantities, but increased both in strength and amount as the disease progresses.

7*th*, *A careful watching for the first signs of returning appetite,* when the sensations of the patient will best indicate the kind of food that will be most suitable. Most frequently the desire is first for soup, milk, or jelly; and shortly after this stage he will be able to eat, and will be the better for eating, animal food itself.

It is almost impossible to over-estimate the importance of maintaining the atmosphere dry and pure, but especially at a *uniformly* high temperature. Attention to this point should never be omitted. By night, and all night as well as during the day, a bright clear fire should be kept constantly burning in the ward when acute inflammation of the thoracic organs has to be treated. It is far safer to rely on this measure alone, in such cases, than to employ any of the drugs contained in the whole pharmacopœia, but it is to be feared that the excessive zeal of our would-be sanitary reformers is often only too successful in frustrating it. How constantly may we observe, during the winter, patients affected with inflammation of one or other of the thoracic organs exposed to a temperature of 50° F. at best by day, and to one as low as 30° F. or 40° F. by night! It is not in country districts alone, or in the miserable garrets of the poor, that such things are to be seen. Foul air unquestionably is only another name for slow poison, but it is probable that very cold air produces effects quite as injurious on the sick and the sleeping. Nor should we ever relax our vigilance in maintaining absolute repose of the mind in all dangerous and acute inflammations. In this respect the human subject should be reduced as nearly as possible to the condition of the brute creation; nay, even to that of the simply organic or vegetative, as distinguished from animal existence. It is needless, however, to say that this would be wholly incompatible with the plan of treatment which we have seen reason to condemn. What with leeching, cupping, blistering, purging, nauseating, salivating, and the like, which constituted the orthodox treatment of our ancestors, and perhaps is even still practised somewhat too often, how was it, or is it, possible for the nervous or even the muscular system to obtain repose?

On the other hand, it must be confessed that the rational method often fails to impress the *profanum vulgus* with the belief that sufficient is being done. "Do you call *that* treatment?" said an elderly medical man once in the ward of an hospital where it was attempted to be carried out. "According to my opinion," he added, "that is no treatment at all." And to those who happen to be profoundly ignorant of physiological and pathological science, it certainly has not the striking effect which is produced by a copious bleeding, *coup sur coup*, by a constant retching, by a violent purging, or by a profuse salivation. It is even doubtful whether it gives to the patient himself that degree of confidence in his doctor which the sudden and marked, though temporary and fallacious relief of a copious bleeding so frequently affords. Whatever vividly impresses the imagination of the patient or the bystanders, even though it cause intense suffering, is pretty certain to receive credit for a large share in the cure.

The popular mind puts immense faith in cupping and blistering, for instance: such measures satisfy it that "something is being done" at any rate; and as the popular mind is generally very ignorant, and believes without reasoning, charlatans make use of their knowledge of this weakness for the furtherance of their own low designs. Charlatans deserve punishment; but no reproach can be too severe, no contempt too profound, for the conduct of those who, without being charlatans, endeavor to prostitute to base purposes the means which science has consecrated to the alleviation of human suffering.

I have dwelt at the greater length upon the treatment of acute pneumonia, because it was necessary to illustrate by an example the principle which I have sought to display and to enforce; but it would be obviously impossible within the limits of this paper to show its application to the treatment of all the acute phlegmasiæ. Such a task would almost necessitate the compilation of a treatise on the whole science of physiology and pathology. Sufficient, however, has been said, I trust, to justify the following conclusions:—

1*st*, That, according to the present state of our knowledge, the natural and proper method of treating acute inflammation consists in diminishing or suspending the functional activity of the affected part.

2*d*, That depletive measures only prove beneficial in proportion to the extent in which they fulfil this indication; that the employment of them is extremely hazardous, besides being unnecessary; and that their curative effects are always uncertain.

3*d*, That the means to be adopted for the treatment of acute inflammation, although always the same in principle, should be varied according to the functions of the parts concerned.—*Edinburgh Medical Journal.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

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Treatment in Poisoning by Opium.—The remarks of a correspondent in last week's Journal, on the common methods of treatment in cases of poisoning by opium, together with his strictures on the course pursued in a case recently reported by Dr. J. G. Blake, call for some comment from us, which want of space did not allow us to make at that time. There is no doubt much that is wise and judicious in the suggestions of Dr. Daniels, but we cannot accept all his conclusions or unequivocally endorse his methods.

Speaking of Dr. Blake's patient, Dr. Daniels says, that when Dr. Blake was called to the man the "influence" of the laudanum "as a stimulant had entirely passed by, and the patient was in a state of genuine debility;" and he asks, "Is this a state in which the prostrating influence of an emetic is desirable, provided the medicine will act as such ?" Without stopping to discuss the propriety of the use of this word "debility" in this connection, we answer that in our opinion it was. That the patient was not entirely narcotized appears from the fact that by shaking he could be aroused so as to mutter a few words and attempt to shake off Dr. Blake's hands or push him away. The patient was a large man, very probably used to stimulants, and therefore to some extent protected from the narcotic influence of the drug he had taken. What harm, then, from the administration of an emetic powerful enough to overcome the insensibility of the stomach and compel it to reject its fatal load? The result, we are told, after a repetition of what we should not regard as a violent emetic, was "tolerably free vomiting, emptying the stomach completely." Now we do not believe the patient sustained the least injury from this. We believe that up to the point of vomiting any amount of emetics may be given in such cases with perfect impunity. Up to that point the power of the emetic is obviously annulled by the opiate ; so that whatever (if any) depressing effect may result, is due to the overplus of the emetic, which, when administered as in the present instance, must have been a very small quantity, and that of so innocent a drug as ipecac. Certainly very few physicians will believe that this was of any very serious weight in the present instance. Even if there had been an obvious risk in employing the remedy, the case was urgent enough to justify it. In extinguishing a fire in a warehouse it will not do to refrain from throwing on water for fear of wetting the goods.

The next point in the treatment was the forced exercise. As we have known this to answer a good purpose and it is generally recognized as an approved method of treatment, Dr. Blake was certainly authorized in employing it. It is possible that in the present instance the exercise may have been excessive, considering the temperature (85° in the shade) under which it had to be used. At any rate, we should have preferred other methods of arousing consciousness, less exhausting, perhaps, which would have allowed the patient a more passive position, such as the use of the battery or of artificial respiration. Dr. Blake, however, failed to obtain a galvanic battery, and adopted the plan of involuntary exercise as the best substitute for it. Finally, it appears that the patient was sent to a public institution, where he had recovered so far as to walk almost without assistance when Dr. Blake left him. The stupor subsequently returning, a drachm of Thayer's fluid extract of belladonna was given, and was subsequently repeated. The patient was partially relieved, but gradually sank away and died about twenty-one hours after taking the laudanum. Now it is not easy to say in the present instance what agent was the precise and special cause of death. Dr. Daniels in his criticism has entirely overlooked the two drachms of extract of belladonna, a preparation the ordinary dose of which is from five to ten drops, and which, given as an antidote, could not in power have fallen far short of the original opiate. Some consideration also should be given to the depressing effect of the extreme temperature, which must have had a very important influence in lowering the vitality of the patient. In conclusion, we think we are justified in saying that the treatment employed by Dr. Blake was such as promised the most favorable results, and up to the last few hours of the patient's life seemed to be fulfilling that promise. The great point of keeping the respiratory process up to the vital point was attained, and justified the belief that the whole economy could be kept in working order until the poison was wholly eliminated, and the danger had passed.

Having had experience of the prompt and most efficient working of the magneto-electric battery in exciting the respiratory process, in a patient who was quite insensible to ordinary modes of stimulation,* we have a decided preference for this agent, in treating cases of opium poisoning, and should always have recourse to it if possible, after evacuating the stomach. The stomach pump is not always at hand for the latter purpose, and we must confess we are not convinced we run much risk of injuring the patient by the judicious employment of emetics.

The case reported by Dr. Daniels in which recovery took place without resort to exercise, would seem to have been one of not very alarming character. The patient was let alone, being carefully watched, after the stomach was pumped out, and her respiration could not have fallen to a very low point during the continuance of the narcotism, or means would have been employed to raise it. It is evident, therefore, that she did not need the means condemned by Dr. Daniels and judged by Dr. Blake to be important in his case.

THE SAINT LOUIS MEDICAL JOURNAL, after an interval of three years' suspension, comes to us once more with renewed life. We hail its re-appearance with the most cordial welcome, as a harbinger of permanent peace and prosperity to the noble State from which it issues. The number for January and February contains much original and valuable matter ; and the names of the eminent professional gentlemen, under whose auspices the Journal appears, are a sufficient guaranty that it will take a place in the foremost rank of American medical periodicals.

COMMENCEMENT OF THE NEW YORK OPHTHALMIC SCHOOL.—At the recent commencement of this institution, the graduating class numbered seventeen. Resolutions were adopted by the class expressive of sympathy with Dr. Mark Stephenson for his recent illness, and complimentary to Dr. Marcus P. Stephenson for his lectures as a substitute, and inviting him to repeat the course at the next session of the institution.

COLD APPLICATIONS TO THE THROAT.—To prove that this practice is not new, the Editor of the Canada *Lancet* quotes from the literature of the subject as far back as Mason Good, where we learn that as long ago as 1822 croup was treated with cold applications. The same has been recommended by various writers at different periods to the present time. The editor says that his own experience in the use of cold applications to the throat for croup is decidedly favorable ; in no instance have they failed to produce a marked good effect on the breathing. He now constantly orders pieces of ice to be held in the mouth, and the cold water to be swallowed in all inflammatory affections of the throat.

The same number of the *Lancet* contains a letter from M. M. Taylor, Surgeon U.S.V., to Prof. N. S. Davis, of Chicago, in which the writer states that for the last four or five years his practice has been to apply ice to the throat externally in the treatment of inflammatory and spasmodic croup, diphtheria, tonsillitis, laryngitis, œdema of the glottis, and, indeed, all inflammatory affections of the throat not connected with the eruptive fevers. It exerts a powerful sedative effect, both general and local, and though it may not arrest, it always modifies the morbid action. He says :—" My mode of application has been to secure a piece of ice, the size of a hen's egg, so shaped as to adapt itself to the form of the neck, upon each side of the larynx, or as near the seat of inflammation as practicable, and for tonsillitis immediately to the submaxillary region, upon one or both sides, as the case might require. I have generally adjusted the ice by enveloping it in a single thickness of oiled silk, so that it could not slip from its place, then, placing it saddlewise over the larynx, I next envelope the whole neck with several thicknesses of flannel, with the view of preventing the temperature of the surrounding air from contributing to any extent in dissolving it. When the ice seems to be no longer required, the moderate application of cold water will prevent too great reaction, and the lighting up anew of the morbid action." This treatment is not solely relied upon to the exclusion of other remedies, but is considered a valuable auxiliary to such other medication as the circumstances of any particular case seem to demand."—*Am. Med. Times*.

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* See a case of recovery from narcotism, reported in this JOURNAL, vol. lxvi., page 436.

MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.—During the year ending Oct. 30th last, 3422 patients were treated—2859 for diseases of the eye, and 563 for diseases of the ear. The expenses were $8075.83, including $2525.28 for building a sea wall. The State appropriation was only $1500, a reduction of $1000 from former years, and this year in consequence of the increase of patients, many of them from the army, the Treasurer asks of the Legislature that the original sum of $2500 may be appropriated.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, MARCH 5th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	54	52	106
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.1	39.7	80.8
Average corrected to increased population	00	00	88.60
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
23	2	5	11	2	1	0	3

MARRIED,—At Cambridge, 3d inst., Dr. George Derby, Surgeon of the 23d Reg't Mass. Volunteers, to Miss Elizabeth Parsons, daughter of the late Wm. Parsons, Esq., of this city.

DEATHS IN BOSTON for the week ending Saturday noon, March 5th, 106. Males, 54—Females, 52.—Apoplexy, 3—inflammation of the bowels, 1—congestion of the brain, 3—disease of the brain, 2—inflammation of the brain, 2—bronchitis, 2—cancer, 1—consumption, 23—convulsions, 4—croup, 2—diarrhœa, 1—diphtheria, 3—dropsy of the brain, 3—dysentery, 1—erysipelas, 3—exposure, 1—scarlet fever, 5—disease of the heart, 4—insanity, 1—intemperance, 1—laryngitis, 2—congestion of the lungs, 5—inflammation of the lungs, 11—marasmus, 2—measles, 1—paralysis, 1—puerperal disease, 1—smallpox, 2—teething, 1—thrush, 1—tumor, 2—umbilical hæmorrhage, 1—unknown, 8—whooping cough, 2.

Under 5 years of age, 39—between 5 and 20 years, 11—between 20 and 40 years, 21—between 40 and 60 years, 21—above 60 years, 14. Born in the United States, 75—Ireland, 22—other places, 9.

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CASE OF CONGENITAL, OBLIQUE, INGUINAL HERNIA IN A FEMALE, OR ENLARGED DIVERTICULUM OF NUCK.

By David W. Cheever, M.D., Demonstrator of Anatomy in the Medical School of Harvard University.

[Read before the Suffolk District Medical Society, February 27th, 1864, and communicated for the Boston Medical and Surgical Journal.]

The subject was a young mulatto woman, of average size and flesh. On removing the skin and superficial fascia of the left side, a pouch of peritoneum, about an inch long, and of the same diameter, protruded from the external abdominal ring. It adhered pretty firmly all round it. Being inverted before the finger, the latter easily penetrated the inguinal canal and internal ring. Around the latter it was found firmly adherent. On being laid open, it proved to be a peritoneal sac, communicating directly with the cavity of the peritoneum, with a piece of small intestine lying opposite the internal ring. It was directly continuous with the general peritoneal surface. Along its lower side ran the round ligament, which became confounded with, and ended in the blind sac. The uterus was a little tilted over by this round ligament. The other side was normal. The sac terminated in the labium. The abdomen bore the lines of pregnancy. The mouth of the os uteri was transverse rather than circular, and the uterus was a little enlarged.

This was evidently an unclosed peritoneal sac, which was cotemporaneous with the formation of the round ligament. Nuck first pointed out a small production of peritoneum continued through the abdominal ring over the round ligament, and terminating in a blind extremity in the groin. He called it a diverticulum, and described it as about an inch in length, and by no means constant. Wrisberg, in 19 out of 200 female bodies, found an opening, leading through the ring into the groin or labium, lined by peritoneum, placed over the round ligament, and terminating by an obtuse extremity. These canals, in different instances, would admit a probe, a quill, or the finger. Cloquet made similar observations, and represents that the membranous productions adhere closely to the round ligament, and that they are met with in women of all ages. Mr. Lawrence says it has not been ascertained that these diverticula become closed; nor have we reason to suppose that their presence favors the occurrence of ruptures.

It is hard to see how such a diverticulum as this, a full inch in diameter, and admitting easily the finger through both rings, could have failed to be accompanied by some portion of intestine. Nor is it easy to imagine how the uterus, thus tilted over, could have risen in pregnancy, unless the diverticulum was inverted in its ascent. The case is presented on account of its comparative rarity.

A CASE OF COMPOUND FRACTURE.

[Communicated for the Boston Medical and Surgical Journal.]

Camp near Brandy Station, Va., Feb. 17th, 1864.

October 12th, about midnight, we were retreating across the Rappahannock, before Lee's Army. Corp. W., of Battery M, 5th U. S. Light Artillery, riding on the trail of a gun, had his left leg crushed between a stump and the trail. Half an hour afterwards I was called to see him, and found the following conditions present:—a compound, comminuted fracture of both tibia and fibula, commencing an inch above the ankle-joint, and extending upwards nearly three inches; the tibia protruded from the wound, and at least an inch of it was missing. There was great laceration of the soft parts, and the external wound was about an inch and a half in diameter. The anterior tibial artery, though exposed, escaped serious injury, as did other large vessels and nerves, which, considering the extensive injury of bone and muscle, was remarkable.

The case seemed to demand amputation; but as we halted but a short time, a rough fracture box was made, in which the leg was carefully placed, and the man put into an ambulance with an attendant beside him. He was ordered to have cold water dressings applied every fifteen minutes, day and night.

We resumed our march as soon as these arrangements were made, and moved till 11 o'clock the next night. During this time the patient took one grain of sulphate of morphia, in four doses. At daylight we marched on Centreville, reaching there at 2 in the afternoon. Patient took sulphate of morphia, gr. iss., during the twenty-four hours, and slept about six hours. Next day, at daybreak, we started for Chantilly, and passed over three miles of the most rocky road I ever saw ambulances travel on; in the afternoon we rested. Patient took sulphate of morphia, gr. ij., during the twenty-four hours. Next day sent patient to Fairfax Station, where he took cars, and arrived at Washington before night. The water dressings were continued from the time I first saw him, till he arrived in Washington, by an attendant detailed for the purpose. No amputation was performed; the case did well from the first, and the man will recover with about two inches shortening. Patient did not appear like a strong, healthy man, but possessed wonderful cheerfulness and endurance.

JOSEPH W. CLIFT,
Act. Asst. Surgeon, U.S.A., Artillery Brigade, 6th Corps.

A NEW METHOD OF TREATING DISEASE BY CONTROLLING THE CIRCULATION OF THE BLOOD IN DIFFERENT PARTS OF THE BODY.

By JOHN CHAPMAN, M.D., M.R.C.P.

It has long been known that the sympathetic nerve, called by Bichat the nervous system of organic life, presides over those processes by which the body is developed and sustained. It stimulates and controls the action of the heart, alimentary canal, genito-urinary organs, and all those processes of growth, repair, and removal of *effete* materials on which the continuous vitality and health of the animal organism depend. During recent years, important additions to our knowledge of the functions of the sympathetic nerve have been made, chiefly by Prof. Claude Bernard and Dr. Brown-Séquard, especially with reference to its power of controlling the action of bloodvessels, or what have been termed its vaso-motor functions. But as the sympathetic and cerebro-spinal nervous systems are intimately related, and, indeed, in some parts, inextricably and indistinguishably blended, both in structure and function, the nervous influence, whether healthy or not, which is exerted over the several organs of the body, is two-fold; hence, when that influence becomes abnormal, either in kind or degree, the most potent method of restoring it to its healthy condition would be by a dual action at once on the sympathetic and cerebro-spinal nervous systems. The physician who acquires the power of directly controlling these great controllers of the organic functions would immediately obtain the mastery over a large number of diseases. I scarcely dare write the words, "I have done this"—so momentous are they if true; and yet I believe I have.

I have discovered that a controlling power over the circulation of the blood in the brain, in the spinal cord, in the ganglia of the sympathetic nervous system, and, through the agency of these nervous centres, also in every other organ of the body, can be exercised by means of cold and heat applied to different parts of the back. In this manner the reflex excitability, or excito-motor power of the spinal cord, and the contractile force of the arteries in all parts of the body can be immediately modified.

In order to lessen the excito-motor power of the spinal cord only, I apply ice in an India-rubber bag about two inches wide along that part of the spinal column containing the part of the cord on which I wish to act. On the same principle, the vitality of the spinal cord may be increased by applying hot water and ice alternately, each in an India-rubber bag, if very energetic action be required; if less vigorous action be necessary, I apply ice, or iced water only, using it several times a day, for a short time on each occasion, with a long interval between each application.

If it be desirable to increase the circulation in any given part of the body, this I have found myself able to effect by exerting a soothing, sedative, depressing or paralyzing influence (according to the amount of power required) over those ganglia of the sympathetic which send vaso-motor nerves to the part intended to be acted on. This influence may be exerted by applying ice to the central part of the back, over a width of from four to four and a half inches, and extending longitudinally over the particular segments of the sympathetic and of the spinal cord on which it is desired to act.

For example, intending to direct a fuller and more equable flow of blood to the brain, I apply ice to the back of the neck and between the scapulæ; increased circulation in and warmth of the upper extremities are induced in the same way; the thoracic and abdominal viscera can be influenced in like manner by applications to the dorsal and lumbar regions; while the legs and the coldest feet ever felt can have their circulation so increased that they become thoroughly warm by an ice-bag applied to the lower part of the back.

The bags I use are of different lengths: of the width already named for adults, and of lesser widths, of course, for children. I have had them made both of India-rubber, and of linen with a surface of India-rubber upon it: the former are the best. The width of the bags is equal throughout, except at the opening, which is narrowed to facilitate tying. and elastic to admit easily the lumps of ice. When the bag is full, I divide it, if a long one, into three segments; this can be done by constricting it forcibly with string; the ice of the upper part is thus prevented from descending, as the melting goes on, into the lower part of the bag. I am preparing a bag on a new principle, which will be a great improvement on those I now use; but as it is not yet complete, I abstain from describing it here. I sustain the bag in the position intended by means of ribbon or tape passed through loops at the back of it, then over the shoulders, and round the body.

Theoretically, I feel assured that by the methods I have described physicians will be able to control the great majority of diseases; experimentally, I have already received numerous and wonderful proofs that this assurance is well founded. By thus acting, by means of cold or heat, or both alternately or combined, on the spinal cord and ganglia of the sympathetic, I have succeeded in completely arresting the fits of many epileptics, and in curing the following maladies:—Paralysis; long-continued and extreme headaches; prolonged giddiness; extreme somnolence; a feeling of want of firmness in standing and of security in walking; habitual hallucinations; loss of memory; weakness and dimness of sight; ocular spectra; inequality of the pupils; lateral anæsthesia; incontrollable spasmodic opening and shutting of the mouth; cramps of the limbs (in two cases of the hands, incapacitating the patients to continue their work); numbness of the fingers, incapacitating the patient to pick up small objects, or to use a needle; paralysis of the bladder; incapacity to retain the urine more than a few minutes (two cases recovered to a surprising extent); profuse and too frequent menstruation; scanty and irregular menstruation; extreme menstrual pains; profuse leucorrhœa, with long-continued bearing down of the womb, and extreme pain of the back; habitual constipation; habitual diarrhœa; general coldness of the surface of the, body which has continued for many years; habitually and hitherto irremediably cold feet.

For the sake of brevity I abstain from discussing here the applicability of the method above described to the several diseases which the physician is called on to treat; but as many cases of paralysis and a very great majority of cases of epilepsy have hitherto proved incurable, I will in respect to these diseases, and especially in respect to epilepsy, make a few observations, and give the briefest outlines of a few cases, showing the results of my method of treating the last-named disease.

To cure paralysis primarily originating in a lesion, not of the brain, but of the spinal cord, it is necessary to exert a curative influence, not only over the spinal cord, but also over the sympathetic nervous system to the extent of the distribution of its vaso-motor nerves throughout the paralyzed limb; to how slight an extent this has hitherto been possible, either by internal medicines or external applications, is too well known to need description here. Assuming the general truthfulness of the doctrines of Messrs. Kussmaul and Tenner, Schroeder van der Kolk, and of Dr. Brown-Séquard, respecting the essential nature of epilepsy, or the proximate cause of convulsive affections generally, we must become still more deeply impressed with the conviction of the necessity of influencing both the cerebro-spinal and the sympathetic nervous system, in order to exert any lasting curative power over that remarkable group of maladies. In Messrs. Kussmaul and Tenner's general summary of the results of their investigations concerning the nature and origin of epileptic convulsions, they say:—"It is probable that certain forms of epilepsy result from a spasm of the muscular coats of the cerebral arteries," and elsewhere they observe that if so, "the central point from which these (spasms) arise would consequently lie in the part where the vaso-motory nerves take their origin, and, therefore, if the results of Schiff's researches be correct, in the medulla oblongata. An excitement of this nervous centre would then be the first link in the chain of these processes, anæmia of the brain the second, and the epileptic attack the third." Dr. Brown-Séquard, in his

"Researches on Epilepsy," after giving his reasons for thinking that "Epilepsy depends in a great measure on an increased reflex excitability of certain parts of the cerebro-spinal axis," proceeds to account for the successive phenomena of an epileptic attack, and, referring to one of the first of them—the paleness of the face—remarks, "We consider it a most interesting symptom, as it leads to a very probable explanation of the loss of consciousness in epilepsy. After Prof. Claude Bernard had discovered that the section of the cervical sympathetic nerve is followed by a dilatation of the bloodvessels of the face, I found that when this nerve is irritated by galvanism there is a contraction of these bloodvessels, and I explained the facts discovered by the eminent French physiologist and myself, by considering the sympathetic as the motor nerve of the bloodvessels of the face. I found, also, that the branches of the sympathetic nerve which animate the bloodvessels of the face, originate from the spinal cord with the branches of the same nerve going to the iris. When the excitation takes place in the spinal cord and the basis of the encephalon which gives rise to the fit, the nerve-fibres which go to the head are irritated, and produce a contraction of its bloodvessels. Of course this contraction expels the blood, and in consequence the face becomes pale. We think that at nearly the same time, when the origin of the branches of the sympathetic nerve going to the bloodvessels of the face receive an irritation in the beginning of a fit of epilepsy, the origin of the branches of the same and other nerves, going to the bloodvessels of the brain-proper, also receive an irritation. A contraction then occurs in these bloodvessels, and particularly in the small arteries. This contraction expelling the blood, the brain loses at once its functions, just as it does in a complete syncope."

Though Prof. Schroeder van der Kolk differs somewhat from Messrs. Kussmaul and Tenner, and Dr. Brown-Séquard, in maintaining that the abnormal changes constituting the proximate cause of epilepsy are more exclusivély restricted to the medulla oblongata than is believed to be the case by those investigators, yet all these distinguished pathologists agree in recognizing the very important part performed by the vaso-motor nerves in producing an epileptic fit; and, though they differ as to the relative frequency of the cases in which the medulla oblongata is the primary seat of the attack, they also agree that it is very often the originating centre of the malady. It may therefore be stated that they all concur in the opinion that the proximate cause of epilepsy is twofold, viz.: an undue reflex excitability of the medulla oblongata, and an undue irritability of those branches of the sympathetic nerve which are distributed to the cerebral arteries, and which, in their abnormally excitable condition, induce spasmodic contractions of the cerebral bloodvessels, and the consequent loss of consciousness and fall, which usually usher in an epileptic fit. I agree with Dr. Brown-Séquard in believing that different segments of the spinal cord, as well as the medulla oblongata, are not infrequently the primary seat of epilepsy; indeed, concerning the pathology of epilepsy, there is, so far as I know, only one point in which I differ from that profound physiologist and skilful physician, under whose guidance, at the Hospital for Diseases of the Nervous System, it has been my good fortune to study. It is true that that "one point" is an important one, since, by diverging in the direction I have taken, I was led by a logical process to conceive of the method of curing epilepsy, which, when months afterwards I was enabled to put it to the test of experiment, realized my sanguine expectations. For the sake of brevity, however, in this preliminary statement, I shall avoid discussing the point referred to. My immediate object in touching on the pathology of epilepsy at all at present, is merely to show that while, as I have said, "to cure paralysis primarily originating in a lesion, not of the brain, but of the spinal cord, it is necessary to exert a curative influence, not only over the spinal cord, but also over the sympathetic nervous system, to the extent of the distribution of its vaso-motor nerves throughout the paralyzed limb," so, in like manner, to cure epilepsy it is necessary to exert a curative influence not only over the spinal cord, including the medulla oblongata, but also over the sympathetic nervous system to the extent of the distribution of the vaso-motor nerves throughout the encephalon.

In treating paralysis according to the method above described, my first effort is directed to the spinal cord, which I endeavor to restore to a healthy condition by increasing or diminishing the circulation of blood in it. I effect either of these results by directly modifying its temperature. Moreover, as fibres from the ganglia of the sympathetic are distributed to the sheaths and bloodvessels of the spinal cord, it can be influenced by cold and heat not only directly, but indirectly by acting on those ganglia. The restorative power which I have been able to exert in this manner is truly surprising, and, I believe, quite unparalleled by any influence ever exerted by medicine.

If the paralyzed limb be cold, my next object is to increase the circulation in it; this I do, as already said, by lessening the vasomotor power of those ganglia of the sympathetic which preside over the bloodvessels of the limb in question. In this manner I find that the circulation in it can be so increased as to make it even very unpleasantly hot.

The health of the spinal cord having been improved, and the circulation and consequent nourishment of the paralyzed limb having been adequately increased, I then, and not until then, apply galvanism to the paralyzed muscle, if this aid seems needful. When thus applied, after the cord and limb have been acted on as described, the affected muscles prove far more rapidly responsive to the galvanic stimulus than paralyzed muscles usually are, and recover their natural size and strength with proportionate rapidity. But in fact such is the health-giving influence of the processes I have described, that the limb will generally recover its healthy condition without the use of galvanism at all.

The treatment thus described has reference to those forms of paralysis originating in a lesion of the spinal cord; but I have found myself able to exert a curative influence scarcely less potent even when the paralyzing lesion is within the skull, and certainly far more so than can be exerted by any internal remedy.

I could support these statements by several illustrative cases, but shall only venture to extend this paper by giving a few facts in evidence of the power over epilepsy which my method of treatment places within the reach of the physician.

In order to cure epilepsy care must of course be taken, in the first place, that all sources of eccentric irritation be removed; assured of this, as far as possible, I direct all my efforts to accomplish two objects—first, to lessen the excito-motor power of the spinal cord by lessening the amount of blood circulating in it; and, second, to prevent those spasmodic contractions of the cerebral arteries which induce the sudden loss of consciousness constituting the first phase of an epileptic fit. To achieve these objects, I order—

First, and most important, ice to be applied to some one part or to the whole length of the back, and from two to eighteen hours a day, according to the special character of the case under treatment.

Secondly, if the extremities be cold, to aid them in recovering their wonted warmth during the first day or two of treatment—by frequently immersing them in hot water, and by friction, also, in winter, by clothing the arms, down to the wrists, and the legs, down to the ankles, in flannel.

Thirdly, as auxiliaries (1) to take abundant physical exercise, and to use dumb-bells when practicable, or other special means of increasing the respiratory activity and of expanding the energy of the spinal cord; (2) so to cut or dress the hair that it shall not cover or keep warm the upper part of the back of the neck; (3) to exercise the brain daily and systematically in some healthy study, or, if this be impracticable, to ensure regular mental activity by means of some interesting employment; and (4) to take care that the dress along the centre of the back be light and cool.

If ice be properly applied to the back, the extremities, however cold, may be made quickly warm, so that in many cases the use of hot water may be wholly dispensed with; but in severe cases, where immediate derivation of blood to the extremities is urgently required, and more especially in winter, it is expedient to accelerate the influence of the ice applied to the sympathetic ganglia by the means just indicated.

The results of this method of treating epilepsy are exemplified in the following cases:—

Case 1.—A man, aged 42, began to have fits in 1854. During the twelve months previous to the beginning of my treatment (May 16) he had, on an average, three fits of about twenty minutes' duration daily; since I began to treat him he has not had a single fit.

Case 2.—A girl, aged 17, began to have fits when between 13 and 14 years old. Has been accustomed since that time to have two little fits (*le petit mal*) daily. I began to treat her February 24, 1863. These little fits immediately became less pronounced, then having gradually lessened in number ceased entirely at the end of the first week, and have never recurred.

Case 3.—A girl, aged 14. Has had fits, chiefly little ones, about six years. She becomes unconscious in each fit, but does not fall down. When I began to treat her (April 23, 1863) she was having fits at the rate of about four in each hour during the day, besides several each night. Each fit lasted from three to five minutes. The night fits ceased entirely in the middle of May, and the day fits, which now do not last above two or three seconds of time each fit, have declined at the following rates:—

Total number of fits during the week ending	May	1	50
“ “ “	“	8	65
“ “ “	“	15	47
“ “ “	“	22	37
“ “ “	“	29	26
“ “ “	June	5	11
“ “ “	“	12	10
“ “ “	“	19	8
“ “ “	“	26	5
“ “ “	July	3	6
“ “ “	“	10	2

Note.—During the week ending May 8, the patient suffered much from toothache, and at length had two teeth drawn. Hence, I believe the fact that she had more fits that week than the previous one.

Case 4.—A girl, aged 20; suffers from falling fits of the ordinary kind, lasting about three minutes each, from little fits, which she calls her "jerks," and in which she becomes unconscious, but does not fall down, and from a frequent quivering of the lips, which is a serious impediment to speech. Of the falling fits she usually has a large, but uncounted number each month. In April last she had them continuously one after another throughout each day during a week. Of her little fits or "jerks" she usually had ten in each of the six days of her catamenial period, and one during each day of the interval. The quivering of the lips is a constant trouble. I began to treat her May 27: since that time she has had one falling fit, lasting about three minutes, and two lasting but an instant each; and since June 15, excepting one little "jerk," without losing consciousness, she has had no jerking fit, no quivering of the lips, and no abnormal symptom whatever.

Case 5.—A boy, aged 13. During the last twenty months has suffered from falling fits, and what his mother calls "stagnation fits," in which he becomes unconscious, but does not fall. On an average he had, until I began to treat him, about fifty of each kind of fit during each month. He came under my care June 4. Since that date he has had only one falling fit, which was induced by his brother, who made him angry, and has had no little fit whatever.

Case 6.—A boy, aged 14, in the habit of having an average of twelve fits daily, each preluded by a shriek. I began to treat him June 11. On that day he had four fits, but each of them without a shriek. Since that day he has not had a single fit.—*Medical Times and Gazette.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Dec. 14th.—*Cystic Disease of the Ovum.*—Dr. Jackson showed the specimen. The case occurred in the practice of Dr. George H. Gay, who sent the specimen, with the following history. The patient was married, 30 years of age, and the mother of two children. He was called to her about the sixth week of pregnancy; flowing had been going on for a few days, and continued, more or less, until labor, being sometimes considerable and during the last two days rather profuse. She also had had vomiting for four or five weeks, and this was an urgent symptom during the whole period of pregnancy. Labor occurred at the end of the third month of pregnancy, as nearly as she could estimate, and terminated in about five hours. The catamenia had been generally regular. About two quarts of the "hydatids" were discharged; and it was very remarkable to find the fœtus plump and perfectly well developed—its length, from the vertex to the soles of the feet, being about four inches, the lower extremities being straightened out. This condition of the fœtus was explained by the fact of a considerable portion of the chorion being perfectly healthy. The cord and amniotic cavity also appeared normal.

Dec. 14th.—*Malformed Heart.*—Dr. Ellis showed the specimen, which came from a hospital patient, a man, 43 years old, who had had moderate dyspnœa as far back as he could remember. This had increased during the last eighteen months. For twelve years he had had some palpitation. During the last three months of life there was much œdema of the lower extremities, moderate ascites, increasing dyspnœa and palpitation, and dark, scanty urine, frequently voided, containing poorly-defined casts and blood corpuscles. There was no orthopnœa for four weeks before death. Respiration on entrance 32, and pulse about 152, very small, weak, uneven, irregular and intermittent.

The heart was large, measuring about seven inches from the origin of the pulmonary artery to the apex, and the same transversely through the auricles. All the cavities, except the left ventricle, were distended by liquid, or recently coagulated, blood. The right auricle extended in a conical form behind the left, gradually diminishing until it terminated in a vessel about as large as the finger, which was probably attached to the left lung in the usual seat of a pulmonary vein; but as the malformation was not discovered until after the removal of the organ, there was some doubt as to the character and connection of this remarkable prolongation of the auricle. On replacing the heart, however, as accurately as possible, the above condition appeared probable. The elongated auricle projected in a remarkable manner beyond the ventricle, when distended with blood. There was no valvular disease. A small portion of the liver presented the appearance of cirrhosis; the other organs not remarkable.

Dr. JACKSON remarked that he had several times found in malformed fœtuses two upper venæ cavæ; one upon the left side was formed by the jugular and subclavian veins, and entered a sort of appendage to the right auricle, which extended behind the heart and towards the left side. He had never met with this anomaly in the adult subject; but, as the vessel that was cut off from the extremity of the tunnel-shaped pouch in the present case was not particularly observed, he suggested that it may have been a second vena cava.

FEB. 8th.—*Glaucoma of both Eyes, with Pregnancy.*—Dr. BETHUNE reported the following case.

Jane N., 32 years old, wife of a working man, first applied to me for advice, Jan. 2d, 1864. Her health is generally good, but for the last six years she has been occasionally troubled with pain, and a tired feeling in the eyes after unusual fatigue. Is now four months pregnant with her fifth child.

The present attack commenced six weeks ago, in the right eye, with pain and redness. Five days afterwards the pain left the right and attacked the left eye, accompanied by throbbing, and the sight began to fail in both. Now, with the right she can see the window bars; with the left can see to go about.

On examination, pupils large, fixed. Eyeballs hard, especially the right. Anæsthesia of cornea. By ophthalmoscope, papillæ appear elevated, and as if a drop of somewhat turbid water nearly covered their surface. Iridectomy was advised immediately, but was declined, as was also paracentesis of the cornea. Local bleeding and cathartics with cold applications were then ordered, and she was not seen again till the 26th. The sight having failed since report, and as she could no longer distinguish objects or guide herself, she consented to the operation. She was admitted to the Infirmary, and the operation was performed, about one fourth of the iris being removed from each eye, by the superior incision. The operation was followed by relief from pain, which, however, returned in a degree five or six days afterwards, and was relieved after a leech applied to each temple. A few days after this she was discharged, but hitherto without improvement in vision.

Dr. BETHUNE said that in several cases he had observed a connection between glaucomatous symptoms and a change in the abdominal circulation. Within the last two years, two ladies of his acquaintance, after an operation for iridectomy, died of malignant disease of the abdomen. He had also observed a tendency to it at about the period of the cessation of menstruation. He did not recollect, however, that Graefe, who had done so much to increase our knowledge of the nature and treatment of glaucoma, had even alluded to its predisposing causes. He thought this might be owing to his fixing his whole attention upon the eye itself, in that way diminishing to some extent the benefit which the world might derive from his great experience and admirable powers of observation.

Dr. WILLIAMS mentioned a case in which he had a short time previously performed iridectomy in both eyes, where the patient had for a long time suffered from progressive stricture of the œsophagus, which had prevented the proper nutrition of the body. Acute glaucoma came on in both eyes, at three days interval, with loss of vision, agonizing pain, and all the characteristic symptoms of the disease. The operation was urgently demanded on account of the intense suffering, although there was reason to fear that the life of the patient could not be much prolonged unless the general condition could be improved. Immediate relief from pain was afforded by the operation, and there was every prospect of complete restoration of vision, as the condition of the eyes improved at once. But the patient survived a few days only.

Dr. Williams agreed with Dr. Bethune as to the frequency of cases of glaucoma in women at or after the critical period. In a large number of patients he had found that a great majority were females; generally those who had passed the critical period, and, frequently, whose health had become impaired, or their nervous energies overtasked by watching and care in illness, domestic affliction, or other depressing causes.

FEB. 8th.—*Prolapse of the Bladder during Labor.*—Dr. FIFIELD said he had been called to a patient in labor, and found the os uteri dilated; but the head not yet descended into the cavity of the pelvis. A short time afterwards he was surprised to feel what seemed to be the distended membranes protruding from the vagina. A more careful examination enabled him to pass the finger beyond this tumor, and to reach the os, which was in the same state as before. He now passed a catheter into the urethra, and found that it entered freely into the tumor, which was the prolapsed bladder. It was carefully held up by the finger until the head had passed, and the labor was successfully terminated. On inquiry, he learned that the prolapse of the bladder had come on during pregnancy, and was considered by the patient to be "falling of the womb." In order to urinate she had been compelled to stand up and lean forward, the tumor being then replaced by the finger.

FEB. 22d.—*Dislocation of the Shoulder of long Duration; Reduction.*—Dr. HODGES reported the case.

A woman, aged 37, dislocated her right shoulder during a struggle, in which both arms were carried above her head and then forcibly pushed backwards. The head of the humerus was driven into the axilla, forward, beneath the coracoid process. This occurred Nov. 26th, 1863. Seventy-six days afterwards she entered the Mass. Gen. Hospital, and the first efforts at reduction were made. The method generally known as Mr. White's was adopted. The patient, being etherized, was seated on the floor. An assistant, standing in a chair by her side, extended the arm vertically. His stocking foot, placed on the top of the shoulder, fixed the scapula, and, with the weight of the patient's body, constituted a counter-extending force, whilst traction was made from the arm above the elbow. On bringing down the arm reduction was accomplished at the first attempt. At the expiration of three weeks the patient was able to use the arm quite freely, and at no time was any tendency manifested to a relapse of the dislocation.

Feb. 22d.—*Treatment of Diphtheria by Ice.*—Dr. Borland said he had been requested by Dr. W. B. Morris, of Charlestown, to bring to the notice of the Society the subject of the treatment of diphtheria by ice, whereby, he firmly believed, this terribly destructive disease might be perfectly, or nearly controlled.

Case. I.—The first case to which Dr. M. was called was that of a little girl, 11 years old, in whom the disease was well established. He gave her brandy, beef soup, a solution of chlorate of potash, and guaiacum, alternately every hour. Having heard of the benefit derived from ice, he ordered lumps of it, enclosed in muslin bags, to be held all the time in the mouth. This patient was seen in consultation by Dr. Mason, who suggested the external, as well as internal, application of the remedy, by means of a bladder filled with pounded ice, wrapped in a napkin, and laid up against the throat. This was continued for seventy-two hours. The membranes, which were very thick, ceased forming after the beginning of the ice treatment, and were thrown off at its termination. The child is now well.

Case II.—A child of a family where this treatment could not be followed out. The throat had been blistered, from ear to ear, by a physician who had previously seen her. This child died. Another had previously died in the same family with diphtheria, and a third person in the house died from the same malady afterwards.

Case III.—The third case in the series occurred in the practice of a friend. No ice was used, and the child died.

Case IV.—Dr. Morris was called to another patient, and found one child of the family already dead from diphtheria and laid out in the same room with the patient, who was failing rapidly, the throat being filled with the diphtheritic membrane. The ice treatment was commenced without delay, and the child recovered.

Case V.—Dr. Bickford, who had seen the last patient, was sent for to go to Brattleboro', to see a child of the engineer of the Hoosac Tunnel. He found the disease well marked, and advised the ice treatment, which was adopted. The child improved so much on the second day, that the treatment was discontinued by the friends; but on the the third day it was much worse. Dr. B. telegraphed to "go on with the ice, and stick to it." This was done, and the result was that the patient began again to improve, and is now well.

Case VI.—In this case the ice was applied for three days, and the patient recovered.

Cases VII. and VIII.—These two cases occurred in the practice of Dr. Bickford. Dr. Morris had not the notes of them, but ice was applied, and both patients did well.

Case IX.—This was a case in which ice was applied and the patient improved; but, as in the Brattleboro' case, the treatment was discontinued, and the symptoms immediately returned. The ice was reapplied, and again improvement set in, which terminated in recovery.

The plan of treatment was the same in all these cases. All of them were undoubted, and several of them were severe cases of the disease.

Bibliographical Notices.

A Manual on Extracting Teeth. Founded on the Anatomy of the parts involved in the Operation; the kinds and proper construction of the Instruments to be used; the Accidents liable to occur from the Operation, and the proper Remedies to retrieve such Accidents. By ABRAHAM ROBERTSON, D.D.S., M.D., Author of Prize Essay on Extracting Teeth, &c. Philadelphia: Lindsay and Blakiston. 12mo. Pp. 198.

THIS is a sound, practical manual, calculated to do much good in the special department of dentistry of which it treats. It is written in a truly scientific and professional spirit. The anatomy of the jaws and teeth is given quite in detail. The subject of toothache is treated of in a manner which forcibly illustrates the truth which is too much overlooked, that no man can be a reliable dentist who is not a thoroughly educated physician. From toothache the reader naturally passes to the one sovereign remedy, the cold steel; which, in its various tortuous and prehensile forms (so familiar and so dreadful to every one who takes the fatal seat in that high-backed chair, with its perpetual mockery of elaborate comfort), is most graphically and abundantly delineated. The various methods of using the same and the reasons therefor are so rationally given, that we should be quite willing to trust the extraction of our most tenacious molar to Dr. Robertson, should dire necessity bring it to such a fate. The various accidents which may occur in the process of extraction, and the methods of treating such emergencies, with a judicious chapter on Anæsthesia in Dentistry, conclude this little book, which is small enough to find a place in every physician's library; and to those of the profession who, from their isolated position, are obliged to practise the operation of which it mainly treats, will be a most valuable acquisition. It is profusely illustrated with good wood-cuts. Messrs. Ticknor & Fields have it for sale.

The Principles and Practice of Dental Surgery. By CHAPIN A. HARRIS, M.D., D.D.S., late President of the Baltimore College of Dental Surgery, Member of the American Medical Association, &c. &c. Eighth Edition, enlarged and revised, with three hundred and twenty Illustrations. Philadelphia: Lindsay & Blakiston. 8vo. Pp. 869.

THIS is the first posthumous edition of the well-known work of Dr. Harris; and the publishers claim to have spared no pains to make it worthy of the reputation which previous editions had gained for its author. Numerous valuable additions have been introduced into the present edition by the contributions of Profs. Austen and Johnston, and Drs. Dwinelle and Maynard; the number of illustrations has also been largely increased. The plan of the author in this work seems to have been so fully carried out that we are ready to accept it without hesitation as "a thorough elementary treatise on Dental Medicine and Surgery, which might be a text-book for the student and a guide to the more inexperienced practitioner." The book is beautifully printed, and the illustrations are most excellent. A copious index makes a valuable conclusion to this handsome volume.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, MARCH 17, 1864.

Commencement at the Mass. Medical College.—Commencement in the Medical Department of the University was this year an occasion of unusual interest. It had been announced that His Excellency the Governor of the Commonwealth was to deliver the address to the graduating class, and the large lecture room of the Medical College was in consequence filled with gentlemen of our profession and others eager to hear how a man, who in the exciting seasons of past peril had so filled us with his burning words of patriotism, and whose far-sighted counsels in the troubled affairs of our country have seemed almost prophetic, would address himself to a class of young men about to enter the ranks of a quiet and still little-understood profession. It was certainly a wise step on the part of the Faculty to thus vary the usual custom, and to select outside of their number or calling some person for the occasion, and all will agree with the Rev. President, who in his introductory remarks took occasion to allude to the eminent wisdom of their choice, and to eulogize "the man who by his sagacity had won the hearts of all loyal people."

It would be impossible to impart to our readers an adequate impression of the address of Governor Andrew, and we shall not attempt it. It will undoubtedly be published, and should be distributed widely among the friends of education. It was evidently the result of much thought, and was thoroughly vigorous and elevating. He spoke of the physician as the good citizen, and of his important services to humanity; of his patriotism in war, and alluded in terms of well deserved praise to Surgeon-General Dale and the gentlemen of the State Examining Board; and of those who had fallen on the field in the discharge of their humane duties, and paid a high tribute to the noble character of the late Dr. L. V. Bell. He dwelt at length upon the duties of all physicians as educators of the community, and upon the great influence they might exercise in elevating the taste and character of our people. He insisted upon the necessity of the cultivation of some other study besides medicine to give completeness to ourselves, and upon the importance of pursuing investigations in the natural sciences, by which the most important of all our faculties, that of observing, may be best developed. He concluded by presenting as an example to the young physician, in all its real loveliness, the bright record of the long life of "the Nestor of our profession."

The address was received with long-continued applause and three earnest cheers for Gov. Andrew. The dissertations read by members of the graduating class were generally of a highly praiseworthy character, and reflected great credit upon their instructors. The order of exercises is here given in full, and the list of members of the graduating class will be found on another page.

Prayer. By President Thomas Hill, D.D.
Dissertations, selected for public reading.
1. Bright's Disease. Benjamin Faneuil Dunkin Adams, Waltham.
2. Death. Willard Shepard Everett, Canton.
3. Anatomical Symmetry. Norton Folsom, Cambridge.

4. Criticism on the Nature of Tubercle—As treated of in "Wood's Theory and Practice of Medicine," and "Jones's and Sieveking's Pathological Anatomy." Edward Greely Loring, Jr., Boston.
5. Puerperal Peritonitis. John Allen Morse, Berwick, N. S.
6. Our Native Materia Medica. Francis Minot Weld, Jamaica Plain.

Conferring of Medical Degrees, by the President.
Address. By His Excellency John A. Andrew, LL.D., Governor.

THE NEGRO'S PLACE IN NATURE.—The following very interesting extract from *The Reader*, in relation to this important question, is from one of Prof. Huxley's Lectures on the Structure and Classification of the Mammalia, which he is now delivering at the Royal College of Surgeons.

The important question now remains—What is the value of the differences which have been shown to exist in the structure of human beings? This question resolves itself into two others. 1. Are these differences sufficient to justify us in supposing them to indicate distinct species of men? 2. Can any of the deviations be considered as transitional towards the lower forms of animals? In respect to the first, it is certain that well-defined types occur in different geographical localities, so distinct that any zoologist, taking a single example of each, without any other evidence, would probably pronounce them to be distinct species; but the fact that every intermediate form can be found between the most typical, and the absence of any proof of their infertility *inter se*, conclusively show that there is no sufficient ground for the doctrine of the diversity of species among men. As to the second question, it can be answered equally positively. Although in the lower races of men now upon earth, and in the skeleton found in the cavern in the Neanderthal, the human characters vary a little in some particulars in a pithecoid direction, the extent of this variation is very slight indeed when compared with the whole difference which separates them; and it may be safely affirmed that there is at present no evidence of any transitional form or intermediate link between man and the next succeeding form in the vertebrate scale.

Professor Huxley concluded the lecture in the following words:—"Up to this moment, Mr. President and gentlemen, I have treated of this question of the differences between the various modifications of the human species as if it were a matter of pure science. But you must have felt, as I have felt, that there loomed behind this veil of abstract argumentation the shadow of the 'irrepressible negro' and of that great problem which is being fought out on the other side of the Atlantic. I have no desire, and, indeed, no right, to discuss the vast and difficult question of slavery here; but, to set myself free from the suspicion of unreasoning partisanship, I may be permitted to say this much; that I am unable to understand how any man of warm heart can fail to sympathize with the indomitable courage, the warlike skill, the self-denying persistence of the Southerner; while I can as little comprehend how any man of clear head can doubt that the South is playing a losing game, and that the North is justified in any expenditure of blood, or of money, which shall eradicate a system hopelessly inconsistent with the moral elevation, the political freedom, or the economical progress of the American people. As a man of science, however, my concern is not with the merits or demerits of slavery, but with the scientific arguments by which both sides have striven to support their cause.

"The fanatical abolitionists do not scruple to affirm that the negro is the equal of the white man—nay, some go so far as to tell us that the American stock would be the better for the infusion of a little black blood; while the milder sort maintain, at least, the indefinite modifiability of the negro, urge that he is capable of being improved into such equality or something like it, and therefore conclude that the attempt to improve him is a great duty. The two former propositions are so hopelessly absurd as to be unworthy of serious discussion. The third is fairly open to discussion; but anything like good evidence of its truth seems to me to be wanting; while, if it be true, the conclusion drawn from it is not indisputable. But I must freely admit that the aberrations from scientific fact, or fair speculation, on the anti-slavery side are as nothing compared with the preposterous ignorance, exaggeration, and misstatement in which the slave-holding interest indulges. I hold in my hand an address to a scientific body of this country which has recently been published, and has, I doubt not, been read by many as an authoritative expression of the results of scientific investigation; and you shall judge for yourselves whether it does or does not merit the stigma of public condemnation, which I think it my duty to take this opportunity of affixing to it:—

"'The skeleton of the negro can never be placed upright. There is always a slight angle in the leg, a greater in the thigh bones, and still more in the body, until in some instances it curves backwards.'

"'The blood is vastly dissimilar—molecular movement within the discs differs in every respect, and, when tried with a solution of potash, the protrusions from the cell-walls take every intermediate form, reverting with great rapidity to the normal condition.'

"'The hair is very peculiar—three hairs, springing from different orifices, will unite into one.'

"Many among you are histologists, and will appreciate the value and practical applicability of the tests of species described in the two last paragraphs I have cited. A male negro skeleton is before you, and all can see how far it is or is not capable of the erect posture: and yet the author of the address in question can write thus:—

"'The above intelligent remarks, although they contain nothing new, are chiefly valuable from the fact that ladies in the Confederate States seem to be better informed on the subject than many men of science in this country"!!

"This quotation is from the preface; gems of a purer water are to be found in the body of the address:—'Vrolik has asserted that the pelvis of the male negro bears a great resemblance to that of the lower mammalia.'

"Vrolik was far too truthful a man and too good an anatomist to say anything of the kind. What he really says in speaking of the male negro is:—'The pelvis also presents many indications of the greater animality of the negroes;' and, further:—'Had this pelvis been taken from a wild beast, its substance could not have been denser, nor its bones stronger.'

"Again, the author of the address affirms that, in the negro, 'The *pia mater* contains brown spots, which are never found in the brain of a European.' This is in the teeth of M. Gubler's paper, published in the memoirs of the French Anthropological Society three years ago, and distinctly proving the existence of a similar coloration in Europeans of dark complexion. 'Not only,' says this writer, 'does the brain, enveloped in its membranes, present a bistre tint, but a layer of black matter, altogether comparable to that of the negro, covers the pons varolii, the medulla oblongata, and some other parts of the nervous centres.' What makes the matter worse is, that M. Gubler's paper is mentioned in a note of the address to which I refer, as if it confirmed, instead of diametrically contradicting, the statement in the text.

"Again, we are told—'The inferior molars sometimes present in the negro race five tubercles; and this anomaly is sporadically found in other races. It has been noticed in the European and the Esquimaux, but is affirmed by my friend Mr. Carter Blake to be more frequent in the negro and Australian than any other race.'

"Truly this is a notable discovery. We shall hear next that the scapula and the femur are 'more frequent in the negro and Australian than any other race.' In my previous lecture, when speaking of the dentition of man, I demonstrated to you the elementary fact, of which, up to this time, I did not imagine the merest tyro could be ignorant, that the lower molars of man are always typically five tubercled; the hindermost alone, from its imperfect development, occasionally breaking the rule. A normal human lower jaw, with the first and second molar devoid of five tubercles, would be a rare and interesting anomaly.

"But the author of the address is far surpassed by an American writer, whom he quotes apparently with entire approbation.—'The negro,' says this wonderful 'Anthropologist,' 'is incapable of an erect and direct perpendicular posture. The general structure of his limbs, the form of the pelvis, the spine, the way the head is set on the shoulders—in short, the *tout ensemble* of the anatomical formation, forbid an erect position.'

"I need only refer you to the excellent cast of a negro in our museum to enable you to judge of the veraciousness of this statement. Nothing, indeed, can surpass its scandalous absurdity, except the reasoning by which it is supported. 'With the broad forehead and small cerebellum of the white man, it is perfectly obvious that the negro would no longer possess a centre of gravity'!

"This brief paragraph contains the most remarkable result of a modification of anatomical structure I have ever heard of. And the faculty for evolving nonsense displayed by its author will prepare you for my final citation, which I forbear to characterize, because the only appropriate phraseology would not be becoming for me to utter or you to hear. 'Thus, an anatomist, with the negro and ourang-outang before him, after a careful comparison, would say perhaps that Nature herself had been puzzled where to place them, and had finally compromised the matter by giving them an exactly equal inclination to the form and attitude of each other.' And this is put before the unsuspecting public, without comment or qualification, as the verdict of science touching 'The Negro's Place in Nature'!"

INFANTILE MORTALITY IN NEW YORK CITY.—From the elaborate statistical tables prepared by Dr. Cyrus Ramsay, Registrar of Records and Statistics for the City of New York, we learn that a steady improvement has been going on in that city for the past ten years, in regard to the mortality of children. This is shown in the fact that the number of deaths of children each year since 1851 has remained nearly the same or even smaller (except during the cholera year, 1854), while the population has rapidly increased, and during the time mentioned has actually doubled. The number of deaths of children under one year, as recorded by Dr. R., was as follows:—In 1851, 6891; in 1852, 6351; in 1853, 6661; in 1854, 7551; in 1855, 6771; in 1856, 6437; in 1857, 6405; in 1858, 7109; in 1859, 6599; in 1860, 6087; in 1861, 6189; in 1862, 5720; in 1863, 6118. The number of deaths of adults recorded in 1851 was 7,775; and in 1863, 10,596. The deaths of adults and children of all ages was, in 1851, 21,748; and in 1863, 25,196.

SYDENHAM ASSOCIATION, IN KENTUCKY.—The physicians of Oldham, Henry and Shelby Counties, Ky., have organized a Medical Association with the foregoing title, for mutual improvement and the advancement of the interests of the profession in that region. We have received a copy of the Bill of Prices adopted by the Sydenham Society and which the members pledge themselves to observe and carry out. The rates agreed upon are certainly very moderate, considering the times, and surely afford no temptation to any member to undercharge. Thus, for visit in village, $1.00, 50 cents each additional mile out of town; office prescriptions, $1,00; vaccination, 50 cents to $1.00; services in attendance on variola, double rates; obstetrical attendance, exclusive of visits, $8,00 ; placental delivery, $5,00 ; reducing simple fracture, $5.00–10.00 ; compound fracture and first dressing, $10.00–20.00 ; amputations, $5.00–10.00.—*Cin. Lancet and Observer.*

MASSACHUSETTS MEDICAL COLLEGE.—The following gentlemen received their medical degrees from Harvard University on the 9th inst. :—

Name and Residence.	*Thesis.*
Adams, Benjamin Faneuil Dunkin, *Waltham,*	Bright's Disease.
Alger, Isaac Daniel, *Williston, Vt.*	Typhoid Fever.
Anderson, Alexander, *Pictou, N. S.*	Delirium Tremens.
Anderson, Walter Duncan, *Pictou, N. S.*	Prolapsus Uteri.
Allen, Charles Gilbert, *Barre,*	The Therapeutic Use of Opium.
Browne, William Andrews, *Boston,*	Stricture of Urethra.
Cahill, Timothy, *Nashua, N. H.*	Hygiene.
Dawson, Thomas, Jr., *Charlottetown, P. E. I.*	Hysteria.
Dearing, Henry Livingston, *Boston,*	Gun-shot Wounds.
Dudley, Henry Watson, *Gilmanton, N. H.*	Inflammation.
Evans, Calvin Eastman, *Island Pond, Vt.*	Gangrene of the Lungs.
Everett, Willard Shepard, *Canton,*	Death.
Folsom, Norton, *Cambridge,*	Anatomical Symmetry.
Hagerman, John Robert, *York Co., N. B.*	Poisonous Effects of Lead.
Larabee, George Herman, *Edgartown,*	The Blood.
Lombard, Josiah Stickney, *Boston,*	Nutrition.
Loring, Edward Greely, Jr. *Boston,*	Criticism on the Nature of Tubercle, as treated of in "Wood's Theory and Practice of Medicine," and "Jones' and Sieveking's Pathological Anatomy."
Lowe, Lewis Gould, *Bridgewater,*	Preparation and Sale of Drug .
Marcy, Henry Orlando, *Cambridge,*	Diabetes, Nature and Treatment.
McFatridge, Robert, *Halifax, N. S.*	Enteritis.
McSheehy, John James, *Boston,*	Typhus Fever.
Millar, Allan Henderson, *Port Dover, C. W.*	Intermittent Fever of Upper Canada.
Morse, Charles Hamilton, *Bridgetown, N. S.*	The Heart and its Circulation.
Morse, John Allen, *Berwick, N. S.*	Peritonitis.
Parker, Moses Greeley, *Dracut,*	Anatomy and Diseases of the Lachrymal Apparatus.
Quimby, Samuel Foster, *Salem,*	Semeiology, Prognosis, Pathology and Diagnosis of Dysentery.
Reynolds, Henry Augustus, *Bangor, Me.*	Dysentery.
Robbins, Nathaniel Alden, *Salem,*	Non-union after Fractures.
Roberts, Jerome Elmer, *Louisiana, Mo.*	Etiology.
Rogers, John Conway, *Pembroke, Me.*	Phthisis.
Rundlett, Howard Malcom, *Stratham, N. H.*	Cirrhosis.
Sanford, Arnold, *Newport, N. S.*	Corpus Luteum.
Smith, Alfred Corbit, *Bathurst, N. B.*	The Human Eye.
Vaughan, Hiram Chaney, *Farmington, Me.*	Diphtheria.
Weld, Francis Minot, *Jamaica Plain,*	Our Native Materia Medica.
Wheeler, Charles Kirkland, *Boston,*	Acute Inflammation in general, its Nature and Treatment.
Willard, Robert, *Boston,*	Treatment of Pneumonia.
Winslow, George Frederick, *New Bedford,*	Cause and Treatment of Hospital Gangrene.

D. HUMPHREYS STORER, M.D.,
Dean of the Medical Faculty.

Wednesday, March 16, 1864.

STUDENTS' PRIZES.—The following prizes have been awarded for the two best reports of cases read at the clinical conferences by students, during the winter term. To Mr. H. G. Miller, of Pawtucket, R. I., a prize of thirty dollars ; subject—A case of Cardiac Disease and Incipient Phthisis. To Mr. A. H. Johnson, of Boston, a prize of twenty dollars ; subject—A Case of Anæmia.

PENNSYLVANIA HOSPITAL FOR THE INSANE.—At the date of the last report there were 285 patients in the institution ; during the last year 193 have been admitted and 193 have been discharged or died, leaving 285 under care at the close of the year. The total number of patients in the hospital during the year was 478. The highest number at any one time was 296 ; the lowest was 268 ; and the average number under treatment was 282. Of the patients discharged during the year 1863, were—cured, 88 ; much improved, 14 ; improved, 33 ; stationary, 27 ; died, 31.

AT the Annual Commencement of the Pennsylvania College of Dental Surgery, held in Philadelphia on the 26th ult., the graduates numbered 17. The valedictory address was delivered by Dr. Geo. T. Barker.

BAILLIERE BROS., importers and publishers of scientific books, have removed their establishment and the office of the *American Medical Times* to 520 Broadway, New York, opposite the St. Nicholas Hotel.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, MARCH 12th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	49	41	90
Ave. mortality of corresponding weeks for ten years, 1853—1863,	37.6	38.5	76.1
Average corrected to increased population - - - -	00	00	83.63
Death of persons above 90 - - - - - - - -	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
10	1	7	7	1	0	1	5

COMMUNICATIONS RECEIVED.—The Formation of Crystals of Phosphate of Lime and Magnesia upon the Intestinal Mucous Membrane.—Two cases of Inversion of the Uterus.

BOOKS RECEIVED.—The Ear : its Diseases and their Treatment. By Franz Adolph von Moschzisker, M.D. Philadelphia, Martin & Randall. Boston, Brewer & Tileston.—Transactions of the American Medical Association, vol. xiv., 1863.

DIED,—At Jamaica Plain, on the 13th inst., of ship fever, contracted in his devotion to the poor, Marcus T. Robinson, M.D., aged 50.—At Woburn, March 9th, of pneumonia, complicated with disease of the heart, Dr. Benjamin Cutter, aged 60 years 9 months 4 days.—In Oswego, N. Y., Franklin Everts, M.D., aged 36.

DEATHS IN BOSTON for the week ending Saturday noon, March 12th, 90. Males, 49—Females, 41.—Accident, 4—anæmia, 1—apoplexy, 1—disease of the brain, 2—inflammation of the brain, 2—bronchitis, 4—cancer, 3—consumption, 10—convulsions, 1—croup, 1—cystitis, 1—debility, 1—diphtheria, 5—dropsy, 1—dropsy of the brain, 3—epistaxis, 1—scarlet fever, 7—typhoid fever, 1—gastritis, 1—hæmoptysis, 1—disease of the heart, 3—disease of the hip-joint, 1—infantile disease, 3—intemperance, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 7—malformation, 1—marasmus, 1—measles, 1—old age, 1—paralysis, 1—peritonitis, 1—premature birth, 1—scalded, 1—scrofula, 1—smallpox, 1—disease of the stomach, 1—unknown, 8—inflammation of the uterus, 1—whooping cough, 1.

Under 5 years of age, 34—between 5 and 20 years, 6—between 20 and 40 years, 29—between 40 and 60 years, 11—above 60 years, 10. Born in the United States, 61—Ireland, 21—other places, 8.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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A CASE OF CEREBRO-SPINAL MENINGITIS, WITH REMARKS.

[Read before the Boston Society for Medical Improvement, March 14th, 1864, and communicated for the Boston Medical and Surgical Journal.]

By Luther Parks, Jr., M.D., Boston.

The patient was a boy, 14 years old, tall of his age, and well till January 22d, 1864. He has been healthy and strong for several years. In early childhood he was very subject to attacks of tonsillitis, which were frequently ushered in with convulsions, but left behind no chronic enlargement of the tonsils. He is of a very tranquil temperament. It has been remarked by his teacher that he is decidedly the least "nervous" of his thirty-five pupils.

He returned to his boarding school in Brattleboro' on the 4th of January, after a nearly six weeks vacation spent in Boston. Though a diligent student, his illness, occurring in less than three weeks after his vacation, cannot be attributed to over-study. His dormitory is remarkably well ventilated. Each pupil has a small separate room, with a special window, and partitions which do not ascend to the ceiling. The house is situated on an eminence, about a mile from the village.

The 22d of January being a holiday, the first half of it was spent in skating. No act of imprudence, on that day or previously, can be ascertained. In the afternoon he was chilly, and spent it in shivering over a furnace register. At night his sleep was much disturbed.

The 23d, he had severe frontal and temporal headache, and vomiting, and was seen by Dr. Gale, of Brattleboro', by whom he was directed to take warm diluents; no solid food.

The 24th, the headache continued, without nausea.

The 25th, he appeared to his attendants much better. Still, it was noticed that the face was flushed, and the eyes glistening. In the night, he became delirious and difficult to manage; persisted in repeatedly getting out of bed, and was transferred to a room by himself.

The 26th, he was found to be in a dangerous state, and I was telegraphed for. I reached him a little before 6, P.M. He was lying upon his left side. His eyes were sunken, dull, and devoid of expression, the pupils being considerably dilated; the lips and teeth were covered with sordes, the tongue with a dirty-white coating. His fauces, tonsils and uvula were more red than natural. There was some dried blood about the nostrils, from slight epistaxis occurring the previous day. His skin was hot and dry. The pulse was 90, soft and full. I will say here that the pulse subsequently varied in strength and rapidity. It was sometimes full, and sometimes strong and hard, and its rate varied from 80 to 120.

The patient's head was constantly drawn back. The muscles of the neck were rigid, tender to the touch, and ached. It was, in consequence, highly painful to him to be raised in bed.

On the nates and elbows were patches of diffused redness, of the color of erythema. In the centre of those on the elbows were uncolored spots of the size of a half-dollar piece, leaving an outer margin of redness, say, an inch and a half wide. Within the area of the spots on the nates, were minute patches where the cuticle looked as if it had been broken, giving, at first, the impression of dried vesicles of herpes. Yet, no herpetic vesicles had been seen. On the loins were two spots (each of the diameter of a ten-cent piece) of this last-mentioned appearance, but without the efflorescence. On the outside of one of the knees was a circular patch, the size of a dollar, which looked as if it had been struck with a round nutmeg grater, there being minute, regularly arranged eminences, looking as if drops of blood had escaped and dried there. The *tâche cérébrale* of Trousseau was exceedingly well marked. For example, on drawing the end of the finger across the abdomen, a broad red stripe made its appearance with greater promptness and brilliancy than I ever before met with it. These appearances continued about the same for some three days, and then gradually subsided. The head was somewhat, but not very hot. There was nothing noticeable in the heart and lung sounds. The respiration was tranquil. There was considerable thirst. The bowels were rather confined. The urine was high colored, but not deficient in quantity. There was some, but not great emaciation at this time, nor did it increase till some days subsequently. The nausea had disappeared. The headache was situated in the forehead and temples, and was severe, causing at times exclamations of distress.

The *delirium* was peculiar. On my first approach, and at all other times, he knew me, and others. On being addressed, he answered logically and pertinently; but immediately afterwards he relapsed into his fancies. His imagination kept the room peopled with his teachers and playmates, with whom and for whom, as it were, he carried on conversations, personating now one and then another, questioning and replying in such tones that the individuals represented were recognized. He imagined the presence of objects that had no existence, often being aware that his mind had deceived him, and speaking of his "optical illusions." He often tried to get out of bed, thinking himself called upon to perform some of the avocations of the school. This delirium continued for about three days and nights, after which it began to decline. There was little or no sleep from the morning of the 25th to the night of the 28th, with the exception of about three hours on the night of the 27th.

The patient had been purged and dry cupped when I saw him. He had had no food, but had been allowed, for drink, water and herb teas. The night of the 26th, the first that I was with him, I tried to vomit him with repeated and full doses of ipecac, but entirely failed, the drug operating as a purgative. I then put him on the use of hydriodate of potassa, in doses of three grains every two hours. Frequent doses of spirits of nitrous ether were also given. The bowels were kept open with Rochelle salts *pro re nata.* Rubefacients were applied to the nape of the neck and spine, and a blister to the upper part of the sternum. Blistering the nucha was avoided, for fear that friction from the patient's tossing about would make a bad sore. The patient was not conscious of the drawing of the blister. A rubber bag filled with ice was applied to the head, but he did not seem to be comforted by it; on the other hand, in his delirium he kept removing it to extract the ice. In fact, no marked or prompt relief followed the use of the above, or any other remedies, in such a way as to point indisputably to any of them as its cause. The treatment was in other respects expectant. Thus, on the night of the 27th, he got two doses, of three grains each, of Dover's powder. At this time, it was, that he first had continuous sleep. It lasted three hours. Again, on the night of the 28th, he was found to have cold extremities, when two doses of whiskey were given. Some four hours sleep followed. His diet was chiefly solution of gum Arabic, which was given *ad libitum*, water freely, and ice frequently. He was also given, once or twice, gruel, and tea with toast.

In the forenoon of each day, the symptoms were less severe than than at other times. Otherwise there were no remissions. From the 22d to the night of the 25th was the period of the formative stage of the disease. From the night of the 25th to the night of the 29th, was the period of the manifestly acute stage.

On the afternoon of the 29th there was an hour when a slow, hard, corded pulse caused some increased apprehension. With that exception, the usual morning amelioration continued into the latter part of the day. On the ensuing night, soon after twelve, the patient passed into a quiet sleep, which continued till morning.

On the morning of the 30th, the improvement continued, and the patient, after waking, soon resumed his sleep, which was quiet and natural, and was evidently not coma. This sleep lasted, with intervals of wakefulness of only a few minutes duration, for three days and nights.

After this, that is, after the 2d of February, he was awake more and more during the day, sleeping well at night. The delirium had disappeared, being, in fact, replaced by the sleep. On awaking out of it, there remained some double vision, and there appeared some intolerance of light. These symptoms soon wore off.

From that time forward, convalescence was steady, but gradual, extreme emaciation and great weakness, however, developing themselves as soon as the active form of the disease had passed off. A little more than four weeks from the commencement of the attack, we were able to remove the patient to Boston, by carrying him in the arms to and from carriages and cars, and stopping one night on the way. About this time a general desquamation of the cuticle was observed.

The patient now, March 6th, between six and seven weeks having elapsed from the commencement of the attack, is able to walk freely about his room, and is clear in his mind, though the attention is easily fatigued. He gains slowly from day to day.

While in attendance on the above patient, I was shown, through the kindness of Dr. Gale, an autopsy of a child some eight years of age, which had presented symptoms corresponding very nearly in character, duration and severity, to those of the above case, except that instead of a natural sleep the patient passed into a state of coma. The autopsy showed extreme turgescence of the vessels, and a generally congested appearance of the membranes and cortical substance of the brain. There was a considerable number of red dots from which blood oozed. At the top of the brain, there was a small spot where there was a doubtful appearance of thickening of the arachnoid. There was also a good deal of serum underneath, and distending, that membrane. There was no increased effusion into the ventricles, and nowhere any pus or lymph.

I was also kindly invited by Dr. Higginson, of Brattleboro', to visit a patient of his, who had been seized with symptoms like those in our case (i. e., headache, nausea, prostration, chilliness and some delirium), though not so well pronounced. He was a vigorous young man, who, the day after he was taken, had been found by Dr. Higginson with a strong pulse, and subjected to a full bleeding. It was the day after that, that I saw him. He was then quite in his right mind, had a full, soft pulse, and was convalescent. He afterwards recovered rapidly.

The three cases above alluded to were by no means the only ones of the kind that came to my knowledge. In Brattleboro', and some of the neighboring towns, there was an *epidemic* of this unwonted disease. It was agreed between Dr. Gale and Dr. Higginson that this epidemic could be clearly traced back only to the 10th of January. There had been two or three obscure cases in the two or three weeks previous to that date, which might or might not have been instances of this epidemic. But the first well-defined case, outside the military hospital, dated from the 10th of January.

Some of the cases were very sudden in their outbreak, and rapid in their fatal termination, the symptoms bursting forth at once, with full violence, and without premonition. For example, a man follows his usual avocations through the day, and is well as usual till nine in the evening. He is then seized with nausea and severe headache. Almost immediately he becomes delirious, in a few hours comatose, and within twelve hours from the onset is dead. Again, a little child of three years, at four in the morning, wakes up well and playful, continues so till 7, A.M., is then stricken down with the acute symptoms, in the afternoon is comatose, and before night is a corpse. In another instance there were two persons in the same family, taken nearly at the same time, and both dying in a day or two.

I now insert a letter from Dr. G. F. Gale, of Brattleboro', giving some statistics of his cases:—

BRATTLEBORO', FEB. 25th, 1864.

DEAR SIR,—Below I will give a few items from my record of cases of cerebro-spinal meningitis. No. of cases, 19: males, 5; females, 14. Deaths, 9; recoveries, 10. Deaths in males, 4; in females, 5. Longest duration of fatal cases, 9 days; shortest duration of fatal cases, 19 hours; average duration of fatal cases, 52 hours. Extremes of age, 3 years to 60; average age, about 16½ years. *Spots* have appeared in about two thirds of the cases; varying so extremely, in different patients, in size and general appearance, as to seem entirely dissimilar.

I have just returned from my twentieth case. A young man (about 18) was about his work yesterday, went to bed last night with some headache, at midnight vomited, having had chills, severe pain in head and spine. He took a "rum sweat," became delirious and soon comatose. I saw him at five this morning. Coma profound, stertorous breathing, pupils insensible to light, no pulsation at the wrist, no eruption. 11 o'clock, A.M., death seems rapidly approaching. Dark livid spots have appeared on the forehead, back and legs, some of which are four lines in diameter, hard, feeling like a flattened shot under the cuticle. Patient died at 2, P.M.

Sectio Cadaveris.—Appearance of brain and membranes similar to the case you witnessed. Stomach nearly empty, normal. Liver, kidneys and spleen healthy. I examined portions of liver, kidneys and spleen microscopically, because my friend Dr. Phelps (Surgeon of the military hospital) informs me that he finds these organs have undergone fatty degeneration in his cases. I found no such change to have taken place in this case.

An interesting pathological point became manifest by the above examination. The mother had previously informed me that the boy fell some fourteen feet (five years since), striking the back of his head upon the barn floor, from which he soon apparently recovered, but after the lapse of three months he commenced having "fits," which have recurred at short intervals (sometimes two or three in a day) up to the time of his death, without much mental injury. I found, in the examination, an old fracture of the right temporal bone, and just at the base of the petrous portion was a point projecting two lines, at least, into the cranial cavity, about which the membranes adhered firmly to the brain. I think that portion of the brain was softer than other portions. Very respectfully yours,

To L. PARKS, JR., M.D. GEO. F. GALE.

To sum up; the leading symptoms in this epidemic were, in brief, headache, nausea, a peculiar delirium, frequently eruptions, which, though various, were most often of the character described in the first case above detailed: these symptoms coming on rapidly, sometimes suddenly, running a brief course, and terminating in fatal coma, or in slow convalescence. The pupils in the cases seen early were usually dilated. Later in the course of the disease they were variable in size. One or two other autopsies have been made outside the military hospital, and I am told there was found a similar appearance to what occurred in that I saw and have described.

I now take the liberty of alluding to certain cases of what I presume to be the same disease occurring at about the same time in the military hospital in Brattleboro', under the charge of Dr. Phelps, Surgeon-General of Vermont.* From the description given me by Dr. Phelps, who several times did me the great favor of visiting the case under my charge, in consultation, I gather that the leading symptoms were generally like those in the cases occurring in the neighboring villages. Instead of a mere drawing back of the head, however, there was, in the hospital cases, complete and persistent opisthotonos; and the eruptions, instead of consisting of patches of diffused redness, were generally impeteginous or eczematous. At the autopsies, pus was seen flowing from the spinal canal. The spot where the worst lesions were found was at the top of the cerebrum. Dr. Phelps considered this especially a military disease, and that it affected chiefly new recruits.

It seems to me that our data are insufficient for deciding whether *spotted fever* was or was not an epidemic of the same disease we are describing.

Dr. Phelps, a great many years ago, before he had become conversant with medicine, had an opportunity of seeing a case of *spotted fever* during the epidemic prevalence of that affection, and declares the eruption in that case quite different from any seen in the

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* This hospital is situated about a mile outside the village, in a direction opposite to that of the boarding school. The situation is high, and well aired, the barracks of wood, well constructed and arranged.

Brattleboro' epidemic. The symptoms of spotted fever, as given by Drs. Bigelow and Holmes, in their edition of Marshall Hall, are, "sense of lassitude, great prostration, faintness at stomach, sinking of the pulse, coldness of surface, occasionally chills, pain in the head, coma, delirium or convulsions, vomiting, in some instances approaching that of cholera morbus, and the appearance of *petechiæ* or spots of effused blood beneath the epidermis. This eruption" . . . . "was not constant." . . . . "Death commonly occurred within twelve, twenty-four or forty-eight hours in the fatal cases. In favorable cases reaction took place, and a mild fever of uncertain duration ensued. *Morbid Anatomy.*—From the necessarily imperfect accounts we have received of *post-mortem* examinations, it appears that little was found beyond congestion in the internal organs, especially in the brain."

We believe that the disease under consideration was not, as has been suggested by some, scarlatina. Our reasons are: 1st, that there has been no evidence of contagion among the cases. My case, it will be remembered, occurred in a school of thirty-five boys, among whom there was no second case. 2dly, the pulse did not present that extreme frequency so characteristic of scarlet fever. 3dly, the throat did not manifest any considerable amount of inflammation. Finally, I am not aware that any of the cases of this disease have been followed by any of the usual sequelæ of scarlet fever.

The principal foundation for the hypothesis of scarlatina, besides the sudden and violent attacks, which are not peculiar to that disease, is, we presume, the red eruption. But, this was not the only form of eruption that occurred, and, when it did appear, it did not occupy the spots which the eruption of scarlet fever chiefly affects; as, for instance, the flexures of the joints. The general desquamation of the cuticle, in my case, was a point of resemblance, though I think of no great significance. Whether or not this occurred in other cases I am unable to say.

The same objection of absence of contagion applies with great force against the theory that the disease was typhus fever. As to the theory of intermittent fever, it is perhaps enough to say that there was no distinct periodicity; and there were no repeated alternations of chills and heat.

I would also submit that it differs from simple acute phrenitis, in that it was asthenic, rather than sthenic; that the delirium was not violent, or even what would be called high, but peculiar, the patient being recalled to himself on being addressed; that, except in the one case mentioned above by Dr. Gale, the usual causes, traumatic and mental, of simple phrenitis were absent.

The impression made upon my own mind is, that the disease is owing to some subtle morbid influence, which is epidemic, and different from those of the diseases with which we usually meet; that influence acting as a poison, so to speak, on the systems of the predisposed, and producing determinations to the brain and sometimes to other internal organs. If any should think to account for the prevalence of the disease in Brattleboro', by the fact of the vicinity of the Connecticut River, it may be replied that, as a matter of fact, the place is proverbially healthy, and that the valley is swept by a dry mountain air. It is possible, however, that the unusual warmth of the present winter may, by enabling the air to suspend a large amount of vapor, have given the river influence an ascendancy over the usual salubrity of the place.

I suspect the term "epidemic," used above, is applicable in a very extended sense. I have read a newspaper account of the prevalence of a so-called "new disease" in one of the rebel States on the Gulf, with a graphic summary of the symptoms, which tallied, in most respects, remarkably with those observed in Brattleboro'.

Furthermore, I find in the able account given last year, in the Boston Medical and Surgical Journal, by Dr. Upham, of "Cases illustrative of the so-called 'Congestive Fever,' or Cerebro-spinal Affection, in the Camps in and around Newbern, N. C.," a sufficient resemblance to the Brattleboro' cases to induce a belief that the two sets were of the same nature.

Dr. Upham says (vol. lxviii., page 314): "In *its mode of attack*, the disease was commonly sudden and without premonition, the patient, for the most part, continuing on duty and making no complaints till the very day of his seizure. Some of the most violent cases thus commenced; Case XII., previously cited, is in point, where the soldier appeared with his company at evening dress parade, complained of chilliness, headache, &c., during the night, and was dead within thirty-six hours following." Page 315, he goes on to say: "The symptoms were, at first, headache, referred oftentimes to the back part of the head particularly, with dizziness—pain in the back and limbs . . . . with sometimes rigors, nausea and vomiting. Chilliness, rather than a well-defined chill, characterized the accession of the disease. . . . . There was often tenderness at the nape of the neck and along the spine early in the disease. The skin was usually moist, but hot. . . . . There was not, for the most part, active delirium, but perversion of intelligence rather, and dulness and indifference to outward objects, *from which condition the patient could be roused and made to answer questions consciously*." [The Italics are ours.] "The decubitus was mainly on the side, with the head not unfrequently thrown back—the neck rigid and stiff—a partial opisthotonos."

One point of difference deserves notice; there were petechiæ in some of Dr. Upham's cases, leading him to suspect or think of typhus: none in the Brattleboro' cases, up to my latest advices. But this sign will perhaps have less weight (at least as a differential symptom) when we consider that in the Brattleboro' cases the eruptions were not constant, or of uniform character, particularly in the military hospital.

I would also remark that in the history of the disease by Valleix, to which I shall presently refer, the eruptions mentioned as occurring differed from each other within a certain range.

The autopsies in the two sets of cases, though differing in the intensity of the pathological changes, were alike in presenting marked traces of inflammation of the encephalon, and in showing a point of election at the top of the cerebrum. Also, the occurrence of fatty degeneration of the liver in one of Dr. Upham's cases falls in with the tendency to that affection alluded to in Dr. Gale's letter, as mentioned by Dr. Phelps.

This disease is very graphically described by Valleix in his "*Guide du Médecin-praticien*" under the name of *méningite cérébro-spinale épidemique*, though M. Valleix doubts any essential difference between this and the sporadic form of cerebro-spinal meningitis. We will quote some of the statements of Valleix on the subject, to show that we have been dealing with the same disease he describes under the above heading, and to confirm some of our positions.

The disease *(méningite cérébro-spinale épidémic)*, says M. Valleix, made its invasion into France, not long before the year 1839; and showed itself first at Bayonne, Newbonne, Foix, Bordeaux. In 1839, it reigned at Rochefort, and almost exclusively in the prison. It was, then, at first taken for typhus, but afterwards recognized as epidemic cerebro-spinal meningitis. Subsequently, it raged in divers localities in France, amongst which were Strasburg, Versailles, Lyons. An account, by Dr. Robert Mayne, of this affection, as it appeared in Ireland, is referred to. The disease is designated by Dr. Mayne as *cerebro-spinal arachnitis;* and we think this fact quite to the point, as in Ireland typhus is, as it were, indigenous, and its characteristics so familiar, that it would seem the disease in question must have been recognized as typhus, unless there were valid reasons for considering it something else.

M. Tourdes is quoted as having endeavored to prove the antiquity of the disease, but, according to Valleix, with doubtful success.

As to the predisposing causes, M. Valleix remarks: "To say that in France the epidemics have shown themselves among soldiers, and principally among new recruits, amounts to saying that cerebro-spinal meningitis has raged among adults, and those towards the ages of from twenty to thirty years. At Rochefort, however, the affection attacked, in the prison *(bagne)*, principally middle-aged subjects, and, in the town, it raged most among individuals less than twenty years old. In Ireland it was otherwise. It results, in fact, from the researches of Dr. Mayne, that the affection showed itself almost exclusively in subjects under twelve years. But it did not appear with nearly so great frequency in children under seven, as in the period from seven to twelve years."

"The remark which I have just made," he goes on to say, "proves that the affection prevailed *almost exclusively among the male sex.*

This corresponds with what M. Lefevre has established in a conclusive manner, since in the town of Rochefort, females were attacked in a minimum proportion. In Ireland the malady showed itself almost exclusively among boys."

In this matter of sex as a predisposing cause, the statistics of my friend Dr. Gale are different, since among the cases he happened to see there were 6 males and 14 females.

In no locality, says our author, *has contagion been proved to exist.*

The same sudden outbreak of the disease is noticed as sometimes occurring, which was observed at Brattleboro' and at Newbern.

The peculiar type of the delirium is specially mentioned, as follows:—"At first, the *delirium* is ordinarily quite easily dissipated by direct questions. That is to say, in replying, the patient seems to come out of a dream, into which he quickly relapses, as soon as you cease to interrogate him. Later, in the disease, it is more difficult to obtain responses, and when they are made they are often inchoherent and wide of the mark."

Valleix mentions the frequency of what he calls tetanic stiffness of the posterior portion of the trunk, the head being drawn backwards, the spine greatly bent.

Our author mentions as remarkable the frequency of certain cutaneous eruptions described by different observers. He cites M. Lefèvre as speaking of impetiginous eruptions; and M. Faure-Villar as having seen spots of a deep brown, or a bright purple, not disappearing under pressure, and not elevated above the surface; sometimes, ill-defined patches of an inky black hue, at other times spots similar to those of scarlatina, or else a red miliary eruption. The latter author mentions a vesicular eruption on the lips. M. Tourdes observed herpes labialis in two thirds of his cases. He also saw rose spots, but only seven times out of ninety-nine cases. Valleix remarks that this last fact confirms what he had observed previously, that rose spots, without belonging exclusively to typhoid fever, are met with in that disease in an infinitely greater proportion than in any other. M. Tourdes found *petechiæ* but three times.

The duration of the disease is stated as varying from twenty hours to eighty, ninety and one hundred days, the average being fifteen days for the fatal cases, and twenty-five days for those which recovered.

In an epidemic observed by Lefèvre, the mortality rated at four fifths during the first part of the epidemic, and at two thirds when it had lost somewhat of its intensity.

Among the post-mortem appearances, all mentioned injection of the cerebro-spinal membranes, increased serosity; or, on the contrary, dryness, false membranes, and pus. The cerebral and spinal substance was found injected, sometimes softened.

Among the remedial measures resorted to, M. Valleix mentions bleeding, which has been tried to a great extent, and with results less satisfactory to his criticism than to some of those who have used it. Cold applications to the head have rather disappointed the expectations which have been formed of them. Results have not been in favor of mercurials. Blisters have been largely used, but no evident advantage resulted from them. On the contrary, they often augmented the suffering of the patient without ameliorating any sumptom. Sulphate of quinine has been tried, but, given for the purpose of conquering the affection itself, it has had no real success. Administered during convalescence, however, with a view to rouse the appetite and hasten the recovery of strength, it has been of considerable utility.

One remedy alone M. Valleix feels authorized specially to recommend, and that is one which practitioners have been timid in using in inflammations of the brain, viz., Opium. He says, opium in large doses is the only remedy which has been administered with any confidence, and which appeared to exert any real influence over the disease. The dose of the drug which has been employed with apparent success, is *two or three décigrammes and sometimes more* in twenty-four hours; the décigramme being equal to 1,544 grains, Troy weight.

Inhalation of ether has been used with apparent benefit, and deserves further trial.

For my own part, if I were to have other cases of this disease to treat, I should use opium in a tentative manner, without beginning, however, by *cannonading* my patient with it, and yet avoiding the administration of it in so small a dose as to excite, without quieting.

As to bleeding, if the case seemed to indicate it by the pulse, temperament, &c., I should not be inclined to entirely reject it. The local abstraction of blood by leeches or cupping I should hesitate still less to try. But I should not go to the extent of *fifty or a hundred* leeches, as was done by M. Tourdes. Still, I should watch more intently to see if there might not be a chance to give beef tea, and even stimulants; and this for the reason of the asthenic aspect of the malady.

Not neglecting the employment of hydriodate of potassa in large doses, my treatment in other respects would be carefully expectant.

THE FORMATION OF CRYSTALS OF PHOSPHATE OF LIME AND MAGNESIA UPON THE INTESTINAL MUCOUS MEMBRANE.

By François H. A. Larue, Professeur de Medecine Legale de l'Universite Laval, Quebec.

[Communicated for the Boston Medical and Surgical Journal.]

On the 1st of February, 1864, I was requested by the Coroner of Quebec to make a *post-mortem* examination of a woman who had been buried two months and some days, and with regard to whose death there had arisen suspicions of poisoning. The body, although putrefaction had already set in, was, considering the time that had elapsed since death, in a tolerable state of preservation. The skin was of a dark-blue color, and the epidermis came off on pressure of the finger.

On opening the stomach, I found a few ounces of a darkish fluid, which I put aside for analysis. Passing my fingers over the mucous membrane, I felt small, hard bodies, which, when taken off and allowed to dry, had the appearance of small crystals of a yellowish-white color. Having some months previously examined the body of a person who had been poisoned by arsenic, I was so much struck by the resemblance of the crystals before me with those found on that occasion, that I felt almost convinced that I had to deal with another case of arsenical poisoning. I accordingly brought the large and small intestines and liver to Quebec for further examination.

The day after my arrival, I proceeded to test the crystals for arsenic by the method of reduction, by sulphuretted hydrogen, &c.; but, to my great surprise, the result was purely negative. I then tried, by Reinsch's method, a little of the liquid contained in the stomach; but the copper leaf, after having remained in it for an hour, was withdrawn as clear and bright as when it was introduced. Thus convinced of the absence of arsenic, I next proceeded to examine the intestinal tube. The stomach and duodenum did not present, either internally or externally, any trace of inflammation. To appreciate, however, the morbid phenomena presented by the several organs, we must bear in mind how long a time had elapsed since death, and also that putrefaction, while it at times simulates these phenomena, at other times causes them to disappear. The mucous membrane of the remainder of the small and of the large intestines was manifestly very much reddened, but only in patches. I had found an *ascaris lumbricoïdes* in the stomach. I found another in the duodenum, four in the cœcum, and two in the colon. The whole of the mucous membrane of the small and large intestines was found lined with hundreds and hundreds of small white crystals, similar to those found in the stomach. The largest of these crystals might be about twice the size of a pin's head, and were found in greater number by far in the large than in the small intestines. Some floated freely in the intestinal liquid, but a great number, having very sharp angles, were so embedded in the mucous membrane as to be withdrawn with difficulty—sometimes even causing the membrane itself to be torn before they could be extracted. The red patches, to which I alluded above, always corresponded to those parts where the masses of crystals were found.

In the cœcum, besides the four worms, I also found three small pieces of bone, each the size of a small nut. One of these bones belonged to the compact, the other to the cancellated portion of bony tissue.

After this examination, I continued my chemical researches, and proceeded to test the crystals for several other poisons, but always with negative results. I then asked myself if possibly I had not to do with one of those rare cases mentioned by toxicologists, where crystals, described as being composed of ammonio-phosphate of magnesia, have been found after death, and are generally considered to be the result of putrefaction, and which so much resemble crystals of arsenious acid, that Christison, among others, was in two cases only convinced of their real composition by analyzing them. I therefore directed my researches towards this point. The crystals thus far not having appeared sensibly soluble in boiling water, I treated them with dilute nitric acid. They dissolved immediately, with the exception of a white flocculent substance, which floated in the liquid solution and resembled grease. This acid solution was filtered and divided into two parts. The first, acted on by ammonio-nitrate of silver, showed the presence of phosphoric acid; the second, treated by the appropriate tests, showed the presence of lime and magnesia.

Wishing to make sure of the composition of this white flocculent substance that had not been acted on by nitric acid, I bruised one of the crystals, which was quite unctuous to the touch, and which, submitted to a microscopical examination, presented to my view the fine tables of cholesterine. The crystals were thus composed of phosphate of lime and magnesia, and cholesterine.

Now, were these crystals, as most writers have considered, the result of putrefaction? I think not. It is true that the phosphate of lime and of magnesia is naturally found in milk and other nutritive substances, such as wheat, peas, beans, &c. It is also true that this salt is nearly always found in the fæces of healthy individuals. But evidently there is no proportion between the quantity of this salt contained in articles of diet and the thousands of small crystals found in this case.

From whence, then, did they arise? Believing that I have here found nature at work, and so discovered their origin, I am led to hope that this communication may not be unimportant. Thus, I mentioned above that I had found three pieces of bone in the cœcum, each the size of a small nut. One of these pieces, formed of the compact portion, was perfectly intact; the two others, on the contrary, belonging to the cancellated portion, seemed corroded, and we could plainly see a portion of their tissue converted into small white crystals, exactly similar to those found in the course of the intestines. When we consider that all the elements of which these small crystals were formed are found in the bones (with the exception of cholesterine, which was evidently there in a mixed state), we cannot but conclude that they were (in the case before us) but a transformation of the osseous substance itself—a transformation effected by the efforts of digestion.

With regard to the effect produced on the intestinal mucous membrane by the presence of these small extraneous bodies, which not only acted by contact, but further by their angles embedded in the membrane, there can be no doubt but that enteritis or gastro-enteritis must be the result.

During her illness, which lasted thirty-six hours, the deceased had most of the symptoms of such disease, viz., vomiting, constipation, abdominal pain, &c.

Then, as to its being a case of poisoning, it was impossible to entertain the suspicion, on analyzing the evidence, and considering the development of the symptoms. Moreover, a general analysis of the liquids of the stomach had already convinced me of the absence of all metallic substances, with the exception of a certain quantity of iron, which is so frequently found in the stomach accidentally.

What conclusions are we to draw from these observations? I think we may safely conclude:

1st. That the presence in the stomach of small pieces of bone, gives rise, in certain cases, by the effects of digestion, to the formation of those small insoluble crystals, which up to the present time have been generally attributed to putrefaction, and which, by their presence, cause enteritis or gastro-enteritis. We would thus have a new cause of enteritis or gastro-enteritis quite unknown, I believe, up to the present day.

2d. That this cause of sickness is probably more frequent than we suspect, considering that many persons are in the habit, while eating, of craunching bones and swallowing them.

3d. That an unhealthy state of the stomach or intestines has probably something to do with this transformation, inasmuch as many persons have swallowed bones without experiencing any bad effects. In this case the deceased had eight ascarides lumbricoïdes, and had suffered some time previously from intense colic.

4th. That if, after examination of a patient, enteritis should be diagnosticated, due to this cause, the treatment would be very simple. By administering to the patient a nitric acid lemonade, both by the mouth and by the rectum, an immediate solution of the crystals would be effected.

Quebec, March 5th, 1864.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, MARCH 24, 1864.

THE CAUSES OF MENTAL DISEASE. DR. RAY'S ANNUAL REPORT OF THE BUTLER HOSPITAL FOR THE INSANE.—The Annual Report of the distinguished Superintendent of the Butler Asylum for the Insane, Dr. Isaac Ray, comes to us this year with unusual interest, from the fact that the previous high authority of the author has been so much strengthened and extended within a few months by the publication of his excellent treatise on Mental Hygiene. The community are ready to receive anything which comes from his pen on this momentous subject as bearing the impress of a master hand, and worthy the most respectful consideration. It is therefore with special satisfaction that we find, on opening his report for the past year, that it is devoted to the discussion of one of the most difficult subjects in this department of mental science, namely, the causes of insanity. Avoiding the commonplaces which are so apt to make up a large portion of these annual reports, after giving the necessary statistical history of the institution under his charge during the year, Dr. Ray proceeds at once to take up this subject.

He adverts to the somewhat common feeling of surprise that there has been so little increase of insanity attributable to the war now raging within our borders. Common opinion has taken it for granted that the losses and sufferings, the griefs and the trials which press with increasing weight upon our people, must bear an immediate fruit of shattered or shaken intellects. Strange as it will appear to most people, the event has not accorded with this apprehension. We believe that Dr. Ray's experience in this respect is fully sustained by that of the officers of other asylums for the insane. Dr. Ray is persuaded, nevertheless, that this bitter fruit of this unhappy warfare is only ripening the more slowly, and is sure in the end to distress us with its unwelcome flavor. The error of the popular anticipation, in his estimation, lies in a widely received and erroneous opinion, entertained as well by the medical profession as by the public at large, that the causes of insanity generally lie upon the surface and can be easily detected. The *post hoc ergo propter hoc* reasoning, so common in matters purely physical and material, Dr. Ray considers to have entered quite as largely into these metaphysical questions, and with as little wisdom. "All our knowledge of morbid action," he says, "warrants us in believing, that the deteriorating influences of this great struggle upon the qualities of the brain will be witnessed not so much in the present as in the next generation." And further on, "briefly speaking, the mistake consisted in supposing that insanity is generally the effect of some profound emotion, or serious bodily ailment, overlooking those organic conditions from which chiefly those events derive their power to harm." And this opens at once the question, how are mental disorders produced?

In his usual, attractive and lucid style, Dr. Ray proceeds to treat of the common tendency, above alluded to, to ascribe mental disorders at once to some marked occurrence, probably the most recent of any importance in the history of the patient, as the cause of the attack. We cannot follow him, but must refer our readers to the report itself, which any analysis can hardly render justice to. After showing how very difficult the solution of this question must be in the nature of things, where so much must depend on the unseen and unknown inner life of the patient, he gives us a leaf from his own experience, as follows:—

> "Admitting that the antecedents are thoroughly understood, if it were possible, it would be quite beyond our power to measure the amount of agency exerted by one and another in the production of the disease. The great misfortune, the terrible affliction, the stunning blow, may have had less to do with the final result,

than some trouble concealed from the common gaze, deep in the inmost recesses of the inner life. On conversing with those who have recovered from an attack respecting the incidents which led to it, I have found, oftener than otherwise, that they laid far less stress on the prominent event which had been fixed upon by others as the source of the evil, than on something so slight, apparently, as to have escaped the notice of the most intimate friend. In my observation of insanity, nothing has surprised me more than such revelations of mental experience, completely upsetting, as they did, our own elaborate conclusions respecting the cause of the disease. Not that the revelations of those who have been insane are always reliable, even if they have perfectly recovered, for the very disturbance of mind must necessarily prevent them from reasoning or even remembering correctly about their mental impressions while under the influence of disease; yet, after all due allowance is made, their conclusions may not be more liable to error than those of outside observers. But well as we may understand these incidents which are obvious to the senses, we can seldom, if ever, be sure that the morbific agency has been exerted by them rather than by those mysterious conditions of the cerebral organism which are indicative of imperfection or tendency to disease, and derived, in the process of generation, from imperfections in the parent or ancestor."

Speaking of the tables of causes so common in hospital reports, where *hard work, fear of poverty, jealousy,* and other supposed causes are duly given to make up the annual sum of statistics, he discredits them all, and looking at them as far as possible with a fresh eye, he says :—

"We shall scarcely find any warrant, I think, for believing that the incidents here named can, in the nature of things, exert a morbific effect on the brain. A poor man can have no apprehension of poverty, while, in the rich, it must be a morbid feeling, of course—part and parcel of the disease of which it is alleged to be the cause. Jealousy, in process of time, gradually increasing, may become a form of mental disease; but to call it the cause of insanity is very like saying that it is the cause of itself. Hard work may produce that exhaustion of the vital energies which favors the development of insanity, but directly it cannot injure the brain."

What, then, is the cause ? How shall we get at the truth in this abstruse question ? And here, again, the more profoundly we think, the more difficult and hidden does its solution become. Nothing less than the long antecedent history of the secret consciousness of the man would seem to furnish reliable data for it. And yet in drawing up the statistics of causes, the physician has very often only the reports of persons of the lowest culture, the immediate friends of the patient, utterly incapable of a philosophical induction, to go upon. The mistakes to which this may lead he points out in the following passage :—

"Prominent among the antecedents of a case is drunkenness, for instance, and an incautious observer would straightway pronounce it the cause of the attack. That insanity may sometimes be fairly attributed to drunkenness, cannot be doubted; but, considering the nature of maniacal impulses, and the abundant opportunities for indulgence, there is always reason to suspect that, under the circumstances supposed, the vice may be an effect rather than a cause; and farther inquiry often confirms the suspicion. Again, a person is found to have avoided society, to have shut himself up in his own home, and thus for years dwelt only with himself—eating his own heart, as old Burton has it—and when, at last, he becomes unequivocally insane, his misfortune is attributed to *love of solitude.* Another, while correctly performing all the duties of his lot, fears that he will eventually come to want, though with enough at present, and with prospects that forbid any reasonable anxiety. He is frugal to meanness, denies himself and family the comforts suitable to their station, and acts as if the poorhouse were ever looming up in the future. After years of such mental experience, every incident becoming gradually intensified, he is pronounced insane, and his case is duly chronicled as produced by *fear of poverty*. Now, in cases like these—and they might be multiplied ad infinitum—it often needs only a thorough knowledge of the mental history of the individual, to find conclusive proof that the drinking, the love of solitude, the fear of poverty, &c., merely masks less obvious steps in the progress of that morbid process which finally ends in overt insanity.

"When the prominent events are many and nearly contemporary, the difficulty is scarcely less. By one friend the attack is attributed, for instance, to the trials of an arduous and highly responsible business. Another attributes it to the loss of a dearly beloved associate; while still another, better acquainted with the patient's private history, is quite sure that he owes his misfortune to fast living. According as we consult one or another of these friends, we shall set down the cause of the disease as application to business, or death of a companion, or intemperance. And yet, any one of these incidents, calculated though they all are to derange the health of the mind, might have been completely harmless in the present instance. The business, though arduous and perplexing, might not have been beyond an easy stretch of the mental powers. The emotion caused by the deep affliction might have subsided under the influence of time or the pressure of duties; and the manner of life, though not conducive to longevity or good health, might have been borne by the help of a good constitution. It is all a matter of conjecture, and conjecture is no foundation for a scientific conclusion. So that, at last, with all the information within reach, the question to be settled is, not which of these events was the cause of the disease, but whether any one of them was concerned in its production."

The gradually increasing ratio of the cases attributable to unknown causes, in the tables of assigned causes (now half or more of the whole number), shows that the force of Dr. Ray's convictions is steadily acting upon other minds as well as his own.

In attempting to solve the great difficulty under consideration, Dr. Ray goes on to discuss the important question of hereditary transmission. This is with him the main secret of mental disease—a predisposition born into the unfortunate sufferer, the woful legacy from a progenitor, immediate or remote. He argues this point with great force; illustrating it by the known facts of the transmission of physical defects or peculiarities in man and the lower animals, as well as by the unquestioned hereditability of many bodily diseases. Want of space prevents our more than alluding to this interesting part of his essay. The conclusion to which he is led is—

"That in the production of insanity there is generally the concurrence of two classes of agencies, one consisting in some congenital imperfection of the brain, and the other in accidental, outward events. I do not say that mental disease is never produced by the latter class of agencies exclusively. The present limited state of our knowledge forbids so sweeping a conclusion. Cases sometimes occur where the closest investigation discloses, apparently, no cause of cerebral disorder within the patient himself. There is good reason to believe that the number of such cases would be lessened by a deeper insight into the inner life and a minuter knowledge of those organic movements which lead to disease. We know that even in those cases in which, to all appearance, the casual incident was most competent of itself to produce the disease, the constitutional infirmity may be often discovered. Drunkenness, epilepsy, blows on the head, sun-stroke, would seem capable, if anything outward could, of producing insanity; but as a matter of fact, we find, not unfrequently, behind these casual events, firmly seated in the inmost constitution of the brain, the hereditary infirmity. Can we believe that it took no part in the morbid process?"

Sad and almost disheartening as this view appears at first sight, Dr. Ray does not find it so discouraging on closer inspection. He does not believe that it must of necessity cast the blighting shadow of an unavoidable fatalism over the life of the unfortunate inheritor of such a tendency. On the contrary, he believes that the dreaded fate may be the oftener averted by calmly recognizing the truth in this matter. That "the peril being understood, it may be kept in abeyance by avoiding all those incidents and influences which are calculated to bring it into active operation, and faithfully complying with the proper rules of living."

From this great truth of the hereditary transmission of the tendency to insanity, Dr. Ray draws in conclusion a lesson of charity in judging of the peculiarities or foibles of our fellow-men; seeing from his point of view, in many disagreeable traits of character or propensities to vice, rather an inherited weakness, to be dealt with in all Christian kindness, than a moral obliquity for which the individual is accountable, and to be met with stern indignation.

We cannot forbear adding one word, in conclusion, with reference to the commonly received causes of insanity, and the statistics based upon them. It appears by Dr. Ray's own showing, that there are agencies which should be recognized as *exciting* causes, even if they are not the fundamental cause. These exciting causes, it is true, may be very difficult to detect, but they are none the less important subjects of inquiry, and, when faithfully traced, must be of great statistical value. So far, then, as his remarks on this subject serve to point out how they are to be sought for, we fully agree with him; but when discovered they must be of great practical importance in carrying out Dr. Ray's own views of the method of counteracting the original tendency to mental disorder. Such tables, then, of *exciting* causes, we are not yet prepared to discard as wholly unphilosophical and worthless.

ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.—We would call the attention of our readers to the announcement in this week's JOURNAL of the approaching annual meeting of the American Medical Association, to be held in New York, commencing Tuesday, June 7th, 1864. There is every inducement to the profession to be well represented on this interesting occasion. The various medical organizations throughout the country, entitled to be represented, will, we hope, make timely preparation for it by the choice of delegates. We hope that the hospitals, as well as the medical schools and the Army and Navy, may send delegates the present year. There never has been a time since the organization of the Association likely to be so productive of direct, practical good to the profession as the present occasion offers. The many great questions of military hygiene and the treatment of the diseases to which our armies are liable, unite thousands of our brethren on topics of common interest; and the opportunity for conference and discussion afforded by this meeting cannot fail to be thus directly beneficial to the whole country. Due pains should be taken by the various bodies sending delegates to observe the proper forms in commissioning them, so that no one may be discredited for want of a regular certificate. A list of the delegates should also be sent, in all instances, to some one of the committee of arrangements. We would also take the liberty of reminding the members of the several committees, standing and special, of the importance of having their reports ready at the appointed time. We hope we shall not have occasion the present year to record of any of these committees the unsatisfactory result—unprepared to report. We trust that both for the reputation of our common profession as well as of our common country, the members of the Association will make a special effort at the present time, that the world may see that the interests of our noble calling are still watched over and sustained, notwithstanding the storm-clouds of war which envelope us.

USE AND ABUSE OF STIMULANTS IN FEVER—OCCASIONAL ANTIPHLOGISTIC TREATMENT.—A few days ago we saw at Guy's several patients convalescent from fever. In reference to them, Dr. Wilks remarked on the treatment of fever by stimulants. A young man, who had had typhus fever, and who had been covered with the ordinary mulberry rash, had recovered without any. As there appeared no need to give any, Dr. Wilks wished to prove to his class that alcohol was not always necessary in fever, and that he did not by any means consider alcohol as an antidote to fever, for he found the disease always ran its course under every form of treatment. He considered the rule laid down by many of the older physicians to be the correct one with regard to the treatment of all fevers; that in very many cases supervision was alone required, and that in others a stimulant plan was necessary; the only question being the quantity of alcohol required and the time when it was needed. He thought, therefore, that those who spoke of their success by the universal treatment by alcohol in all cases of fever, were adopting (to say the least) a very unscientific method, which was, in reality, one founded on such a reasoning as this: That severe cases of fever are benefited by alcohol, and mild ones are not killed by it, and, therefore, it is safer to give it to all. The same may be said of those who declare carbonate of ammonia to be *the remedy* for all cases of scarlatina. It is, no doubt, of great value in severe cases, and in mild ones it certainly will not kill the patient. Dr. Wilks would not say, however, that wine and spirits did no harm, for in some cases he believed they were decidedly injurious, especially in young persons with typhus fever and violent delirium. He had such a case under his care, in which he ordered cupping to the back of the neck, and which was followed by quiet and sleep. He was a total disbeliever in the change of type theory; for such a case as this, and two others which he had seen bled, and yet did well, entirely refuted such an opinion. Although he believed the present plan of treatment by support saved more lives, he was quite sure, that if no stimulants were given, and that if the patients were bled, the greater number would recover as heretofore.—*Med. Times & Gaz.*

TREATMENT OF DYSENTERY BY LARGE DOSES OF IPECACUANHA.—This plan of treatment was introduced, or brought prominently forward, by Dr. Docker, of Mauritius. The use of ipecacuanha in dysentery is by no means novel; but the employment of such large doses, and in the method described, is (Dr. Hillier said) of comparatively recent date.

The plan is to give a drachm of tincture of opium, to apply a mustard plaster over the epigastrium, and, in twenty minutes, to give a drachm or a drachm and a half of powdered ipecacuanha in a very small quantity of peppermint water, or simple water. Sometimes half an ounce or an ounce of castor oil is given, with half a drachm of laudanum, before beginning the special treatment; this is, however, usually found to be unnecessary. Vomiting is not often induced, and the cure is often immediate. A patient may be passing, every half hour or oftener, blood and mucus, or bloody serum with pus. They cease at once for about twenty-four hours; he then has a natural stool, and is well. The diet is farinaceous.

In May, 1862, Mr. Baylis, of Ceylon, wrote to Dr. Hillier that he had treated fifty or sixty cases in this way, and only lost three, who were in articulo mortis when they came under his care.

Dr. Hillier has had the opportunity of trying this mode of treatment at the Children's Hospital. It was in the case of a child, aged 4 years, suffering from sub-acute dysentery contracted in Barbadoes. He gave five minims of laudanum, and, in half an hour, fifteen grains of powdered ipecacuanha. There was no nausea or any unpleasant symptom caused by the medicine; and although the patient had previously passed five or six motions, containing much blood and mucus, every twenty-four hours, there was no evacuation for thirty-six hours. He then passed an ordinary feculent motion, and from that time he continued quite well It is stated that ipecacuanha has the effect of rapidly healing large dysenteric ulcers. Dr. Hillier suggested that it might be worth while to try it in the diarrhœa dependent on tubercular ulceration, or in typhoid fever. The opium is supposed to act mainly in preventing vomiting, but it may, with ipecacuanha, have a more specific action on the disease.—*Ibid.*

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, March 19th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	37	47	84
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.3	36.3	77.6
Average corrected to increased population - - - -	00	00	85.27
Death of persons above 90 - - - - - - -	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
13	5	5	2	2	1	1	0

Died,—In Louisville, Ky., March 19th, Joshua Barker Flint, M.D., Prof. of Surgery in the University of Louisville. The deceased was a native of Massachusetts, and a graduate of Harvard University of the class of 1820.

Deaths in Boston for the week ending Saturday noon, March 19th, 84. Males, 37—Females, 47.—Accident, 2—anæmia, 1—aneurism of aorta, 1—apoplexy, 1—disease of the brain, 4—inflammation of the brain, 1—bronchitis, 1—burns, 2—cancer, 1—consumption, 13—convulsions, 3—croup, 5—debility, 1—dropsy, 2—dropsy of the brain, 2—drowned, 1—dysentery, 1—erysipelas, 2—scarlet fever, 5—typhoid fever, 1—hæmorrhage, 1—disease of the heart, 3—infantile disease, 1—influenza, 1—disease of the kidneys, 1—laryngitis, 3—disease of the liver, 2—congestion of the lungs, 2—inflammation of the lungs, 2—marasmus, 1—paralysis, 1—phlebitis, 1—pleurisy, 2—premature birth, 1—puerperal disease, 1—purpura, 1—smallpox, 2—disease of the spine, 1—suicide, 1—syphilis, 1—tumor of the intestines, 1—unknown, 2—disease of the uterus, 2.

Under 5 years of age, 29—between 5 and 20 years, 12—between 20 and 40 years, 16—between 40 and 60 years, 18—above 60 years, 9. Born in the United States, 64—Ireland, 16—other places, 4.

THE

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SURGICAL CASES AND COMMENTS.

[Reported to the Boston Society for Medical Improvement, Feb. 29th, 1864, and communicated for the Boston Medical and Surgical Journal.]

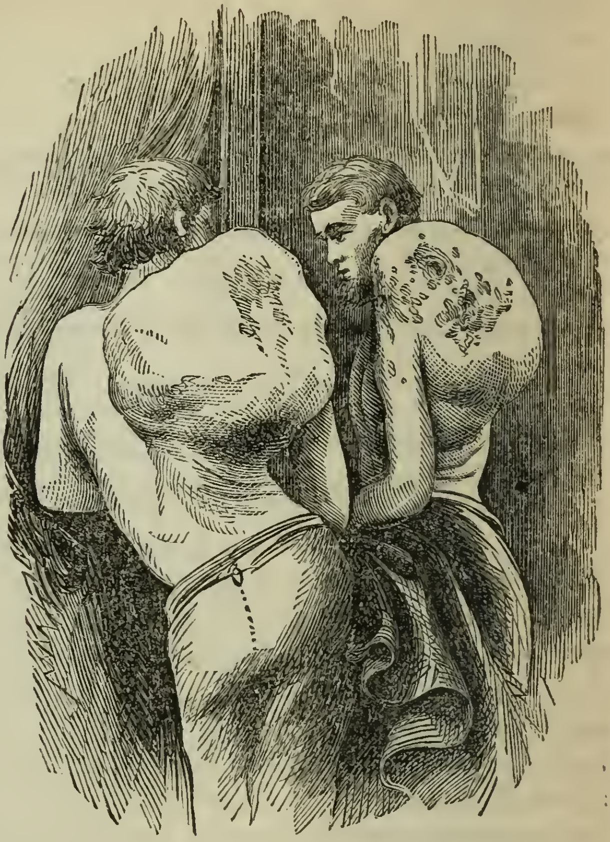
By Henry J. Bigelow, M.D., Boston.

Case I.—*Enchondromatous Tumor of the Scapula.*

The following case is interesting chiefly for the large size of the tumor. The patient is a farmer, residing in Salem, Conn., and 26 years of age. His appearance is healthy, and his strength is such that he shoulders his immense burden without difficulty, and walks about with alacrity. He states that six years ago a tumor appeared upon the back of the right scapula, and continued to grow slowly for about four years, when it had attained the size of an orange. During the last two years the growth has been much more rapid. It now extends from a line just outside the vertebral column and parallel to it, over the right shoulder, apparently involving about two thirds of the clavicle, and the upper six inches of the humerus. It is of almost bony hardness, of very irregular outline and firmly attached at its base. The irregularities are discovered both in its general outline, which is elevated, and at certain parts which are characterized by uniform conical elevations, half an inch or more apart, and rising an eighth of an inch or more from the surface; these last being more numerous upon its outer aspect, and hard or only slightly elastic. Upon the outer and upper surfaces of the tumor is a growth of hair, some inches in diameter, upon a discolored skin, which without doubt belonged originally in the axilla, and from which it had been displaced by the growth of the tumor. The clavicle has become thickened, and is lost beneath the mass. The humerus presents two distinct knots, one below, the other upon its inner aspect. The skin is everywhere movable, excepting a small inflamed spot upon the outer side, where it shows some tendency to ulceration.

The following measurements were taken at the Massachusetts Gen. Hospital, Dec. 28th, 1863. Circumference of base, 45 inches. Antero-posterior circumference, including the axilla, 39 inches. Antero-posterior, transverse and vertical diameters, each, 14 inches.

The growth of this tumor, the manner in which it has invaded the bony structures, its characteristic outline, its firmness and elasticity, and the continued good health of the patient, leave little doubt of its enchondromatous character.



A graphic representation of the tumor is seen in the accompanying wood-cut, from a photograph, taken, as the man stood before a mirror, by Black, of this city. This skilful artist has furnished to the College Museum a number of large and admirable representations of the patient, who was exhibited to the medical class in attendance upon the lectures, as now to this Society; the patient himself appreciating fully the interest that has been felt in his case, and cheerfully submitting to whatever it was desirable to do for a full examination and perpetuation of it.

At the last meeting of the Society (March 14th), Dr. Jackson alluded to the above case, and gave the following final history in regard to it:—

During the past week Dr. Bigelow received notice of the death of his patient from one of the friends, and of the willingness of his mother that the body should be disinterred for examination; and being obliged to leave the city for a few days, I offered to attend to the business for him. An arrangement was made with Dr. Charles M. Carleton, of Norwich, Conn., who had previously shown a strong interest in the case, and who most liberally devoted an entire day to the accomplishment of our object, the place of burial being at a considerable distance from N. The body was carried, in its coffin, to a shed adjoining the cemetery; but it was found impossible to make such an examination of the tumor as the importance of the case demanded, and the entire mass was accordingly removed and brought on here for a full examination.

The weight of the tumor was 31 pounds. In regard to structure it consisted, to a great extent, of as pure an enchondroma as would perhaps ever be seen; and the microscopic accorded with the gross appearances. The lobes were not so marked as in the two cases figured by Cruveilhier (*Anat. Path.*, livr. xxxiv.), but the lobules were well defined; and the interstices were traversed, as usual, by an abundant fibrous tissue. Where the structure was firm or rather dense, the lobules were closely compressed; but in other parts, and especially at the lower part of the tumor, they were considerably softer, and there they hung more loosely together. To some extent there were no formed lobules, but the mass had an amorphous though somewhat granular appearance; and here it was still softer, though it nowhere had the gelatiniform consistence that enchondroma sometimes has. To a small extent the firmer portion of the tumor had a rich reddish tinge; but there was nowhere any extravasation of blood. At some depth from the surface, and where the structure was quite firm, there existed an irregular cavity that would have held two or three ounces; it contained a brownish synovial-like fluid, and the defined parietes were formed by the enchondromatous structure itself. A smaller and similar cavity existed near the above; and in several of the lobules there was a central softening, brownish discoloration and serous infiltration, as if in preparation for a cavity. The amount of calcareous matter was quite large; and it was generally scattered irregularly throughout the mass as a creamy-white, amorphous deposit. In very many of the nodules, however, it appeared, on section, as a narrow, defined line, and in the form of a more or less complete ring; and, on further examination, this ring appeared, in some of them, to be a section of a more or less complete little sphere. After removing typical specimens from different parts of the tumor, and which will presently be shown to the Society, the remainder of the mass was put into water and will be left to macerate, when a better idea will be had of the more solid part of the tumor; something like the external surface of the scapula being exposed in the course of the dissection to the extent of half an inch or more.

The clavicle was perfectly healthy, though surrounded by the morbid growth, except at its outer extremity, where there arose from its upper surface a bony tumor, equal to one and a half inches in diameter, or more. This last was of a somewhat reddish color and cancellated structure, and was, in fact, an exostosis, as distinguished from the calcareous deposit above referred to; it arose from the outer parietes of the bone, which last, though intimately connected with it, was continuous and healthy in appearance, as appeared on section. In this cancellated growth was one small enchondromatous deposit, and its upper extremity was directly continuous with a large mass of the same.

The shoulder-joint was entirely disorganized. The head of the humerus was in part covered by cartilage; but one half of it or more was denuded, and to a considerable extent it was pretty deeply carious. The deltoid was quite well marked, and there were the remains of some other neighboring muscles; but the head of the bone lay loosely in a broad, shallow cavity, lined by a soft, red, cellular tissue, and in which no traces of the original joint were to be seen. The humerus, having been removed, showed the two marked "knots" described by Dr. Bigelow, and one of which is distinctly represented in one or more of the photographs that were exhibited by him. One of them was about as large as the top of the little finger, acuminated in form, and shown, on section, to be simply an outgrowth of perfectly healthy cancellated structure; the thin shell of bone that surrounds it, and the parts external to it, being also perfectly healthy. The other was considerably larger, situated rather lower down, and about the middle of the bone, but in other respects similar to the one described, except that instead of standing directly out from the bone it was bent down upon it; and, on section, the cancelli seemed to be filled with an opaque, yellowish-white cerate-looking substance; it contained, however, nothing like an enchondromatous structure. The rest of this bone was healthy; the reddish color of the cancellated portion contrasting strongly with the interior of the "knot" last described. The existence of a pure exostosis, apart and by itself, in a case of enchondroma, is certainly an interesting pathological fact in relation to the nature of this last disease.

The right subclavian artery was considerably larger than the left; and, with the nerves, ran along the surface of the tumor, but without being embedded in it.

The separation of the mass was very readily effected, and the parietes of the chest were left in a perfectly healthy condition; a very important fact in reference to the result of the operation, if a removal of the tumor had been attempted during life.

The internal organs of the thorax and abdomen were also healthy externally; excepting a slight enlargement of the vertebral extremity of one of the middle ribs upon the right side, and which ought to have been but was not examined.

The following history of the patient's case was obtained from his mother, who, though advanced in years, is a woman of intelligence; and it will be observed that there are discrepancies when compared with his own account; but these are no greater probably than we should often find in our chronic cases if different authorities should be questioned. The tumor had been forming ten or twelve years; but it grew slowly until three years ago, when it was not larger than the head of a child at birth. Since then its growth has been very rapid, and during the last year it about doubled its size. There had been pain in the "cords of the neck" and down the arm occasionally for years; and sometimes it extended below the elbow. But the patient had no pain in the tumor; it troubled him only by its weight. His general health had been as good the last ten years as it was the ten preceding. Last month he was absent ten days on a visit to the medical schools of New York and Philadelphia. Whilst in the latter city "the veins burst," where the skin was sound, but thin and distended over the tumor; the bleeding was so free as to make him feel weak, but it was arrested. He began to fail from that time, returned home, and died in eighteen days. The superficial sores enlarged in size, became deeper and sloughed; so that after death a cavity was found not far from seven or eight inches in diameter and one or two inches in depth, with much of the calcareous matter exposed upon the inner surface. The pain in the arm increased, but still there was none in the tumor; he was also unable to move his fingers or the forearm, and there was much numbness, though of this last there had been some before. Meanwhile he was confined to his bed, with loss of flesh, strength and appetite.

A very interesting fact that was ascertained by a visit to the mother of the patient was the existence in her own case of a well-marked enchondromatous tumor. It is situated just above the right knee-joint, upon the outer aspect and towards the front. It is about half as large again as the fist, of a rounded form, quite knobbed, dense, with a slight degree of elasticity, immovable upon the bone and occasionally quite painful. She is now 66 years of age, and of good general health; and, the tumor having existed from childhood, she is sure, she says, that it has been as large as it is now for forty years.

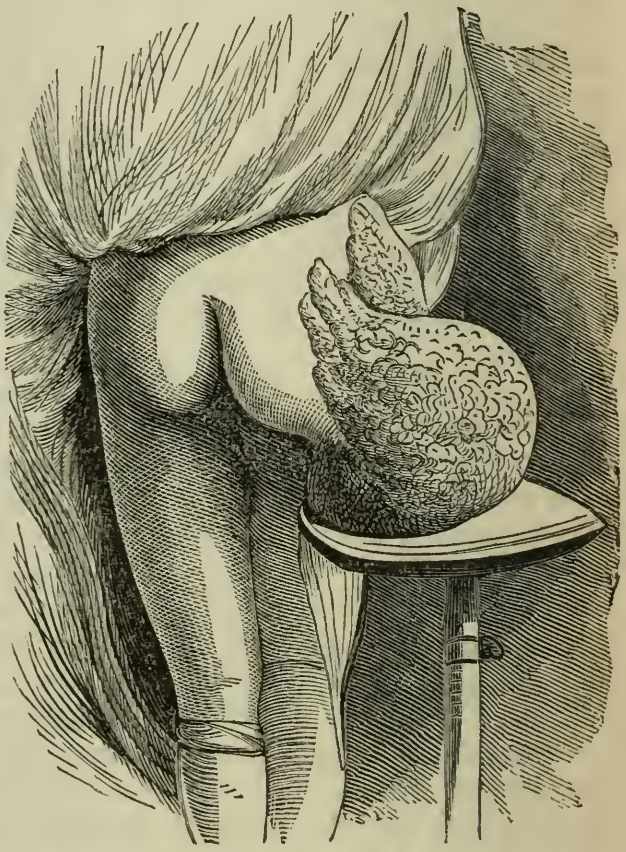
CASE II.—*Fibro-cellular Tumor in Scrotum.*

This case occurred in a patient 42 years of age, and the disease was of one year's duration. The general aspect of the tumor was that of a very large hydrocele, but further examination showed the testicles to occupy nearly a normal position high up on each side near the pubes. There was no probability that the tumor was of hernial origin, as the inguinal rings were normal in size and clearly defined. The tumor consisted chiefly of slippery lobes that eluded the grasp, and was supposed before the operation to be either fatty or fibro-cellular. It may be remarked that behind and near the anus the insertion of the scrotum had a brawny feel, and the termination of the tumor was remarked to be there undefined. Upon cutting down, the first lobe that was exposed declared the fibro-cellular character of the tissue; and after a dissection, which was rendered tedious by the adhesions, the tumor resolved itself into two principal masses. Each of these was somewhat lobulated, six or more inches in length, three or four inches in diameter, and smallest at the neck. The dissection was carried downwards and backwards between the bulb of the urethra and the rectum, each of which was exposed, and through the triangular ligament. Their insertion was discovered fan-shaped and expanded, high up somewhere between the prostate gland and the rectum, where ligatures were passed around the two pedicles and the masses were cut away.

These tumors are interesting for their insertion high up in the ischio-rectal fossæ, which was doubtless their point of origin. The microscope showed them to consist of a fibroid structure, with some attempt at an elongated cell-growth; and lying free within the skin and not involving it, they differ from a similar structure which is occasionally found attached to and corrugating the skin itself. Examples of the latter kind exist in elephantiasis of the scrotum, and also in some other outgrowths, of which the following is an example.

CASE III.—*Fibro-cellular Tumor growing from the Skin.*

The patient was a young woman, 25 years of age, and the tumor was of six years' duration when it was removed, in August, 1856. She was troubled only by the weight of the mass, which was suspended from the upper part of the left buttock by a large pedicle, the whole weighing, after removal, 13½ pounds, and being well represented in the accompanying wood-cut. The surface of the tumor was discolored, as in elephantiasis, wrinkled and lobulated, but perfectly flaccid. A few days' confinement to the bed reduced the size of the tumor and rendered the whole mass softer, so that it was evident that the growth owed something of its size and induration to œdema when suspended as usual in the vertical position. The discolored and lobulated investments of the tumor terminated abruptly at their margin in the healthy skin. The wound after excision measured about 13 by 17 inches, and the patient, after having been much prostrated, finally recovered. Microscopic appearances as in the preceding case.



This winter (1863–64) I again examined this patient, and found the tumor beginning to re-appear.

CASE OF DEATH FROM SUPPOSED POISONING.

By Robert T. Edes, M.D., Surg. U. S. N.

[Communicated for the Boston Medical and Surgical Journal.]

James Olivier, a ward-room servant, about 20 years of age, a native of Louisiana, very nearly white, though of African descent, reported to me on the evening of Feb. 12th, with pains in his head and body which had come on rather suddenly during the day. As intermittent fever was extremely prevalent on board, and this patient had some time previously been subject to it, I prescribed, without further inquiry, twenty grains of quinine for the next morning.

At that time he was seen in my absence by another surgeon, who considered him to have remittent fever, and prescribed a small quantity of quinine, to be taken through the day. He is said to have been delirious at that time, but not violently so.

When seen in the afternoon, he was quite wild and delirious, complaining chiefly of extreme headache. Pulse very small, extremities cool, but not cold. He had vomited somewhat, and had passed one or two small dejections in bed. A blister was ordered to nape of neck and a sinapism to the epigastrium. He was placed in a warm bath, and cold affusion used upon the head and chest, which produced some shivering and gasping. He seemed barely conscious, said nothing but "Oh dear," &c., opened his eyes when loudly spoken to, but did not answer but once or twice. Medicines were administered with great difficulty. I regret that the state of the pupils was not particularly observed, but I have an impression that they were rather contracted.

After removal from the bath he was so violent in his motions as to require several persons to retain him. He seemed to know when the bed-clothes were off, and pulled them around him only to be again thrown off in a few seconds by another paroxysm. The medication consisted in quinine, a mercurial purgative and an opiate, none of which had any apparent effect.

The bath was given about six, and he continued in very much the same condition as above described until 1.30 A.M., when he became somewhat more quiet. His head was ordered to be shaved and painted with tincture of iodine. The quinine was resumed in the morning, and before twelve he had taken thirty-five grains. At 9, A.M., his pulse was 135, tolerably full, surface warm, some twitching of muscles of face and hands.

His urine, which was very copious, contained pale waxy casts with some epithelium, but no albumen. Another mercurial purgative was administered, followed by oil, and dry cups were applied over the kidneys. At 8, P.M., brandy and water were ordered, but he could not swallow it. A stimulant injection was immediately given, but returned with a few specks of fæces. Breathing somewhat stertorous, pupils rather dilated. Mouth and nostrils obstructed with thick, whitish mucus.

He died at 8.25, P.M., with a slight convulsion.

The autopsy was made twelve hours after death, in the presence of several other medical officers, as thoroughly as we could do it. The only remarkable points were that the trachea and bronchi contained much whitish mucus similar to that seen in the mouth and nostrils during life, extending down as far as the tubes could be followed with scissors. The lining membrane was congested.

The stomach contained over four ounces of dark-brown fluid, which smelt of brandy. Its membrane presented only some slight ecchymosis, and an appearance either of erosion or false membrane just at the cardiac orifice.

The liver and spleen were both larger than normal, the latter being at least three times its normal size, but both appeared of perfectly normal structure.

The kidneys were perhaps a little congested. A whitish mucus similar to that observed in the bronchi could be squeezed from some of the calices.

The intestines presented nothing worthy of note, containing only yellowish semi-fluid contents.

The contents of the cranium were apparently perfectly healthy.

Urine drawn from the bladder after death contained much epithelium of irregular shape.

The contents of the stomach consisted of oil, a large quantity of mucus with epithelium in abundance, and some dark-green masses of various size, the larger breaking up on pressure. One specimen showed a large number of minute acicular crystals.

The mucus squeezed from the kidneys showed very large quantities of epithelium. It was only a few hours before the death of the patient that I learned the facts which induce me to call this a case of poisoning. They were, in brief, that threats had been made against the patient on shore, that his illness dated from his return from a visit to the shore, and that he expressed his belief that he had taken something to hurt him.

The autopsy may be said, in brief, to show, besides the chronic changes in the liver and spleen, only a remarkable desquamation of epithelium from all the principal mucous surfaces, and decidedly to exclude meningitis, congestive fever or acute disease of the kidneys.

The want of an accurate chemical examination is greatly to be regretted; as, though from the length of time elapsed since the supposed poisoning, a negative result would not prove the diagnosis incorrect, yet a positive one would be the strongest possible proof of its correctness, and would besides decide the nature of the poison.

My own suspicions point towards stramonium, which grows in great abundance in Mound City, as in many other waste places, and according to the U. S. Dispensatory produces symptoms somewhat like those of my patient.

U. S. S. Black Hawk, opposite mouth of
Red River, March 3d, 1864.

TWO CASES OF INVERSION OF THE UTERUS.

By Albert Smith, M.D., Peterborough, N.H.

[Communicated for the Boston Medical and Surgical Journal.]

Case I.—I was called hastily to Mrs. S., with her second child, Feb. 16th, 1864, the messenger saying that Dr. Cutter, the attending physician, wished me to be as quick as I well could be. Thus summoned, I was soon at the bedside of his patient. I was informed by the doctor that she had been delivered about three hours. The labor was a perfectly natural one, the pains never of any unusual force or strength, nor had it continued more than three hours before delivery. The placenta came with the last pain, and all was supposed to be well. There was not the slightest indication or apprehension of any danger in the case, till she complained of being faint, when, upon examination, she was found flooding from the uterus. This was easily suppressed, without much loss of blood, by cold applications, and yet she remained pulseless and insensible, without any signs of rallying. After waiting a while with the hope of amendment and none appearing, the hæmorrhage having been entirely suppressed, Dr. C. made a vaginal examination, and, to his dismay, found what he supposed to be the cause of all this extraordinary prostration. He requested that I should be called immediately. When I came, he briefly related to me the above facts, and asked me to make an examination to ascertain the cause, without informing me at what conclusions he had arrived. No man is to be envied his feelings, who, for the first time in his life, encounters an inversion of the womb. No time was to be lost—the woman was in a state of collapse, if not moribund. I immediately examined her, and found a large rounded mass, half the size of a child's head, nearly filling the vagina, quite hard and unyielding to pressure. What could it be? I felt over the abdomen with my left hand and found no uterus. This was very easily done on account of the thinness of the walls at the termination of utero-gestation. By pushing the protruding mass above the pubes, I could feel the uterus with the other hand, and in this way only. At once the conclusion was arrived at, that it was an inversion of the womb. I quickly announced my decision, in which the doctor fully concurred, having satisfied himself before that it could be nothing else. The patient had been a long time in a state of collapse, and no time was to be lost if the reduction could afford any relief. I immediately made an effort to reduce the uterus. After a little pressure with the ends of my fingers I was able to push the fundus backwards and soon to return the whole mass—with no spring, as mentioned by many writers, nor a feeling of much contraction of the uterus, after it was reduced. This was no doubt owing to her condition, for she seemed in a state of hopeless collapse, and was none the better, nor indeed the worse, for the reduction, for in about an hour she expired, without having exhibited any signs of rallying.

Case II.—The other case occurred in the practice of Dr. J. S. Burt, of Greenfield, N. H., May 29th, 1860. He was called in the night of the above date to attend Mrs. Rogers, of Antrim, in childbirth with her sixth or seventh child. There was nothing unusual in the case, either as to the length of time or the severity of the pains—except that it might be called a hard labor. She was delivered about 2 o'clock, A.M., and being very much exhausted and flooding a good deal, the doctor advised to leave her undisturbed, till he should make his visit during the day. When he returned, past the middle of the day, she was dressed and got to bed very comfortably, without one bad symptom. Early in the evening she was raised up and set upon a vessel for the purpose of evacuating her bladder, when she suddenly cried out, that "something had come from her." She was in great distress. The doctor was immediately sent for, but being many miles distant did not see her till near 1 o'clock, A.M. To his great consternation, he found a large mass lying between the thighs—it being, as he apprehended, a prolapsus of the womb and vagina; and these parts having been so long expelled had become very cold, and the patient was in a state of collapse. There was no time to call counsel. His course of proceeding, nevertheless, was just right. He administered stimulants freely, and applied fomentations to the inverted womb until it became warm, and then attempted its reduction by compressing it between his two hands till he pushed it into the vagina, when it seemed to leap, at once, from the ends of his fingers. The patient died towards morning (there having been but little hæmorrhage), it would seem entirely in consequence of the inversion of the uterus.

The first case was not an entire inversion; the fundus and body of the uterus descended through the os, and lay inverted in the vagina. It was more readily reduced on account of the collapsed state of the patient—and yet it required a persistent and continued pressure for some minutes before it was felt to be receding from the fingers. The last case was an entire inversion, and, after being pushed into the vagina, the uterus seemed to leap from the fingers, as represented in the books. The doctor, in describing the case, used this very expression, "it seemed to leap from my fingers," which was an accurate description of the fact, not anything he had read, for he was not a reading man—being self-made, all that he was, without any aid of the schools, nor, indeed, much of books. He practised medicine as nearly as he could in the manner of the regular faculty, abhorring and discarding all forms of quackery as much as any of us could, till his course was arrested, about two years since, by the appearance of cataract upon both of his eyes. This formidable case was one of his experiences.

Both of these cases were fatal. The shock to the system was so great that neither rallied. It is always a dangerous accident, and yet why it should be attended with fatal syncope and collapse to some, while others experience none of these symptoms, but partially recover, and enjoy tolerable health, even with the organ inverted, we cannot tell.

Neither of these accidents happened in consequence of any force used in removing the placenta; it both cases this came away without any traction. The books generally state that inversion of the womb usually results from the harshness and force used by the accoucheur in removing the placenta—and, when it occurs, it is alone his fault. It is plain to me, that inversion of the uterus does most generally proceed from other than mechanical causes—that it may be owing to a certain condition of the uterus, in which one portion may be in a state of contraction while another is in that of relaxation. Dr. Tyler Smith thinks it depends in all cases upon an active condition of the uterus. He says *(Braithwaite,* No. xix., p. 289):—"When it takes place without any mechanical interference, there can be no doubt of the preternatural and perverted activity of the uterus. But I am convinced that even in cases when the placenta is attached to the centre of the fundus, and when the cord is drawn through the vagina with any amount of force likely to be exerted by an accoucheur, it is not a mere mechanical displacement which produces the accident, but that the irritation of the fundus uteri by traction, excites contraction of that part, causing its descent, which is the first stage of the accident. The common opinion has very naturally arisen from observing, in some cases, that the fundus uteri, when the placenta is firmly attached, follows the advancing cord, while traction is being made. According to my view, the depression of the fundus uteri, even in these cases, is not a simple mechanical yielding of the part, but an active contraction, excited by the irritation of the fundus uteri by the traction on the placenta."

NOTE ON A NEW MODE OF APPLYING SOME EXTERNAL AGENTS TO THE EYE.

By J. F. Streatfield, F.R.C.S.

[From the British and Foreign Medico-Chirurgical Review, January, 1864, p. 281.]

The use of paper as a medium for the application of sulphate of atropine and various other soluble salts to the eye, has been before the public since my communication on the subject in the "Ophthalmic Hospital Reports," in the number for January, 1862. This medium has been very much approved, and I may say generally adopted, owing to its convenience, and more or less also owing to its peculiar efficacy in some cases. It has occurred to me that an improvement might be made if, in the new medium, we could secure, along with the convenience and efficacy pertaining to the paper, some vehicle which would not need to be removed from the eye after it had been applied and the desired result had been gained. I have not now time or space even briefly to relate the advantages arising from, or the way of making the application by, the paper vehicle. I can only refer to my communication above mentioned, and to another in the succeeding number of the same Journal. But I may allude to the alarm felt by some patients at any investigation of their eyes, even if only to remove the scrap of paper that has been introduced, and to the trouble sometimes found in removing it when it has got up beneath the upper lid. As the proposed substitute for paper need not be removed, the surgeon will often be saved a delay of twenty minutes, and will not be obliged to wait for the desired effect in order to remove the scrap of paper. Therefore, also, the patient can be trusted to employ the new medium himself, which is not the case with the old one. In order to obtain what I wanted, I first tried what is called "wafer-paper"; but this is brittle when dry and loses all consistence when wet, so that it becomes unmanageable as soon as it is moistened; and moreover the pulpy substance in the eye, if not washed out, might irritate. I am now employing gelatine, rolled out in sheets of the thickness of thin writing-paper, and imbued with a definite proportion of sulphate of atropine, or any other salt required. This retains the advantages of, and only requires the same mode of application as, atropine paper, but *it need not be removed from the eye.* It is soon dissolved in the tears, and acts in every way well. The dose employed thus, it appears, is more quickly applied to the eye than when a similar dose has to be dissolved out of the meshes of tissue paper; and to this it is that I attribute the pain felt by some of my patients when I have used a large square of "gelatine atropine paper." They have not complained of pain when I have used a smaller bit (or dose), less than a whole square. I am thinking of having a check of small squares printed in green on the gelatine, to define the doses, and to make the transparent gelatine more readily visible, *when about to be used,* for it need not be looked for afterwards.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

FEB. 22d.—*Case of Purpura, with unusual Symptoms, fatal within forty-eight hours.*—Dr. ABBOT said that he was called at 6, P.M., on the 20th inst., to a little girl 9 years of age, who had been ill only since the previous day. On the morning of that day she was as well as usual, took breakfast and went to school. During the school session she had severe rigors, accompanied by more or less general pain. She remained, however, until the school was dismissed, and on returning home took some punch which was given her by her father-

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* It is made by Mr. Squire, chemist to Her Majesty, 277 Oxford Street, London.

This was followed by vomiting and an increase of the general pain. Scattered spots of purpura were then for the first time noticed. The vomiting continued at short intervals during the rest of the day and the following night, and the pain was very severe. On the 20th, this last symptom was so much relieved that in the afternoon the child said she felt quite well except her head, which ached badly. She had been quite restless, however, with some slight flightiness of mind, until within half an hour of Dr. Abbot's visit, when she fell asleep. Dr. Abbot found her sleeping rather heavily, with a hot skin and pulse at 180, and remarkably feeble. Spots of purpura, varying in size from the diameter of a pin's head to a third of an inch, were observed on the face, trunk and extremities. They were of a dark purple or lavender color, and very sharply defined. Between these spots, on the exposed parts of the arms especially, the skin had a blotchy, purplish look, as is common in young children when very much chilled. By the report of the friends, there had been no sign of blood in the urine or alvine evacuations, nor had there been bleeding from any of the mucous orifices. The lips and tongue were slate-colored, as in the collapsed stage of Asiatic cholera; and yet, with all these signs of constitutional depression, the heat of the skin was intense and burning. It was found extremely difficult to arouse the child, and consciousness was only partially restored. She awoke sufficiently, however, to show very decided impatience at being disturbed, and after frequent repetitions of the same question would answer by a nod, but could not be brought to reply orally. In this alarming condition her father was sent for, and a stimulant (spiritus ammoniæ aromaticus) was ordered to be given every hour until contra-indicated. The child rested quietly most of the night, occasionally muttering in her sleep, and was found dead at 4, of the following morning. She had been heard to speak in her sleep within half an hour previously. No autopsy was made in this case, but it seems probable that death was the consequence of congestion or pressure from sanguineous effusion within the cranium. The child was in comfortable circumstances although poor, and the disease cannot therefore be ascribed in this case to any defect of nutrition. She had been apparently well up to the morning of the attack.

The question naturally suggests itself whether this case should be properly considered one of purpura, or rather one of some unusual form of febrile disease, perhaps that known as spotted fever. The suddenness of the attack, its severity and rapidly fatal course, together with the febrile symptoms observed, and atthe same time the absence of hæmorrhage, would seem to give some probability to the latter view. The child was not known to have been exposed to any cause of infection, and no similar case is known to have occurred in the neighborhood before or since. The recent occurrence of cases of spotted fever in different parts of the country, gives special interest to the present one. The patient, however, was not seen by Dr. Abbot until she was moribund, and he did not feel prepared, under the circumstances, to give a more positive diagnosis. It should be remarked that the attack came on, on the last of three days of the most intensely cold weather of the season. Could the extreme cold have had any effect as an exciting cause?

[In connection with the above case, the following passage from

Drs. Bigelow and Holmes's edition of Dr. Marshall Hall's Theory and Practice of Medicine, first edition, p. 282, is not without interest; it was not noticed until the above was prepared for the press. The editors are describing the spotted fever of New England.—S. L. A.]

"This disease was characterized by the following symptoms. Sense of lassitude, great prostration, faintness at stomach, sinking of the pulse, coldness of surface, occasionally chills, pain in the head, coma, delirium or convulsions, vomiting, in some instances approaching that of cholera morbus, and the appearance of *petechiæ*, or spots of effused blood, beneath the epidermis. This eruption, which gave the name of Spotted Fever to the disease, was not constant, and was less frequent in the years 1808–9, than in the two preceding. Death commonly occurred within twelve, twenty-four, or forty-eight hours in the fatal cases. In favorable cases reaction took place and a mild fever of uncertain duration ensued.

"*Morbid Anatomy.*—From the necessarily imperfect accounts we have received of the results of post-mortem examinations, it appears that little was found beyond congestion in the internal organs, especially in the brain.

"*Causes.*—The disease prevailed most in the cold months, and was thought to be excited by the immediate influence of cold, the depressing passions and debilitating agents; but its special cause remains utterly unknown. It is somewhat singular that the suspicion of its contagiousness seems hardly to have been entertained. This circumstance would throw some doubts upon the similarity supposed by Dr. Gerhard to exist between spotted fever and the British typhus, since the last is considered by most observers, and by Dr. Gerhard himself, to be eminently contagious."

FEB. 22d.—*Dilatation and Hypertrophy of the Heart; Disease of the Mitral and Tricuspid Valves.*—Dr. ELLIS showed the specimen. The hypertrophied and dilated heart was distended by liquid and recently-coagulated blood. The mitral valve was greatly diseased, the orifice admitting only the tip of the little finger. It was covered with cretaceous deposits, denuded in one or two places. The chordæ tendineæ were not so much shortened as usual. Aortal valves almost quite healthy. The tricuspid valve was most remarkably diseased, looking as if it had been torn across, and afterwards firmly cicatrized; the rest of the valve was healthy enough. The orifice was much contracted. The left auricle was thickened and dilated; its lining membrane was opaque, and in one or two places thickened in patches. The left ventricle was thinner than natural.

With the exception of great firmness of the lungs and of the solid abdominal organs, nothing else abnormal was found.

The patient was a man, 28 years of age, who had never been very strong, but showed no sign of cardiac disease until eight years before death, when dyspnœa became troublesome on walking up hill. Avoiding this exertion, however, he continued to attend to his business. Twenty months before death the cardiac symptoms became so urgent that he attempted to return to this country from a distant port, but was obliged to be put on shore. He improved, however, and again made the attempt with success.

He was first seen by Drs. Jeffries and Bowditch in March, 1863, when he complained much of palpitation and dyspnœa. There was increased dulness on percussion, and excessive action with a bellows murmur over the mitral valve, and a slight obstructive murmur over the aortic. His feet were somewhat swollen, but the œdema disappeared, and from June to August he needed no medical advice. Towards the close of the summer he had some diarrhœa, and in November, pneumonia, from both of which he recovered. Feb. 3d, Dr. Jeffries was called and found him suffering with his old symptoms, under which he sank in about three days.

MARCH 14th.—*Uterine Polypus.*—Dr. E. D. G. PALMER showed a large uterine polypus, and gave the following account of the case:—

The patient is 45 years of age, and the mother of five children. Her labors have been natural and easy. About 3½ years ago she miscarried at the third month. Since that time she has had no medical advice until Monday last, when Dr. P. was called to see her, for what she supposed was "a falling of the womb." She had suffered from this, she stated, for three years. There had been bearing-down pains, and hæmorrhage occurring frequently and at irregular intervals. Of late, the loss of blood had been profuse and exhausting. By the advice of a female acquaintance, she had recently been taking some kind of strengthening medicine, and had worn a bandage with a perinæal strap.

On examination, a large tumor was found distending the vagina, and slightly protruding beyond the labia. As no os could be felt, and the finger could be passed upwards, and around the tumor, Dr. P. concluded that it was a uterine polypus, although he was unable to reach the pedicle. Dr. H. G. Clark accompanied Dr. Palmer on his second visit, and was of opinion that the case was one of uterine polypus probably, though it might prove to be the uterus inverted. It was arranged to etherize the patient on the following day, and then draw down the mass, so as to determine its character, and facilitate the application of a ligature. In the mean time injections of the chlorinated solution of soda were ordered, and a cathartic to be taken immediately. On the evening of the same day, being hastily summoned, Dr. P. found the whole mass expelled, and the pedicle within reach. A ligature was applied and the tumor excised. Its weight was 2 lbs. 13 oz.

Dr. ELLIS said that the tumor, on incision, was of a looser texture than most fibroid growths of the uterus, and very vascular.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, MARCH 31, 1864.

PHARMACY AS A FINE ART.—Not among the least noticeable of the changes which a more extensive knowledge of the laws of hygiene and disease and of the physiological action of drugs has introduced into the modern practice of medicine, is the effect which has been produced upon the character of the *apothecary* and his shop in our day; a respectable title, which we still prefer to that of dispensing druggist or practical pharmaceutist, now so generally adopted by the fashionable toy-merchant. We all remember the dusty old bow window, which let in enough light for science, the gilded mortar above the door and the ever-clanging iron one within, the stacks of green bottles of blown glass, the big drawers filled with nauseous powders, the broad spatulas for spreading the favorite blister and plaster, and the still and retorts, which were then so necessary. What we then needed, we got at second hand at least. We had before our eyes in its original form every simple, from which the preparation wanted was made, our ears were deafened by the assistant toiling at the mortar, our sense of smell taught us that there was virtue in what the dingy shop contained, and we were sure of the honesty and skill of its master. We have indeed changed all this, but have we improved our condition thereby?

Do we approach one of our æsthetical establishments in the evening, it is with the impression, even afar off, that a brilliant conflagration is in progress, so intense is the flare of light thrown into the street. There are no walls, we find, but those of plate glass, and a dazzling scene of glittering cut-glass, gorgeous with the last glowing colors which chemistry has discovered, beautiful flowers and bouquets, all that the elegance of a lady's toilet-table demands, and soaps in packages of every shape and tint, illuminated by the most powerful of sun burners and multiplied and reflected by the purest mirrors in every way conceivable, fill our eyes with wonder. Do we dare to enter, we breathe the delicious and delicate perfumes of nature's rarest exotics and of the subtlest productions of art. We see, most conspicuously placed, an immense glittering pagoda of silver or a chaste marble shrine devoted to the sparkling carbonic-acid water, and long lines of show-cases filled with the latest Parisian novelties. We tread upon marble, around us are lustres, enamel and gold, and above a frescoed ceiling. Are we indeed in the temple of the handmaiden of medicine? We do, in fact, on looking closely, discover certain familiar names upon crystal bottles and porcelain jars, and, occupying a modest corner, a balance, but they look strangely out of place. We should never dare to ask for hepar sulphuris, or for such a vulgar substance as ferrum, in the midst of such Eastern splendor, though we might perhaps find musk, or opium, or hashisch.

Seriously, however, we object to this union of the business of the fancy-goods dealer with that of the apothecary. We believe that the preparation and dispensing of powerful medicines is a serious business, and that it should be carried on in quiet places free from fashionable traffic, and by persons better versed in pharmacy than in floriculture or gallantry. It is becoming more difficult every day to procure reliable drugs, and instead of finding a proper guaranty for the purity of a preparation in the apothecary who sells, we are now obliged to investigate the character of the manufacturer as well. We have known officinal preparations of the simplest kind, in which there would seem to be no possible motive for deception, certainly none on the ground of cost, to contain but one half the amount of their active principles, and bearing the name of one of the best-known manufacturing druggists. The exporter first extracts a large percentage of its virtue and sends his drug to the American market. In place of a scientific inspector, we get but a politician, who admits it on the certificate of a chemist, who is willing to allow his analysis of a single ounce of the specimen to pass for that of a ton. The wholesale druggist grinds it in his mills, and mixes a good deal of we know not what with it, in which state it is sold to the manufacturer, when another adulteration is possible, and only after it has passed through many hands does it reach the bed of the suffering patient. This process of pulverizing every drug for the purpose of wholesale adulteration has grown into a great evil. It has become almost impossible to obtain a whole specimen of any substance, vegetable or mineral, used in medicine, and even crystals of our commonest salts can with difficulty be procured to exhibit to a class of students. We are in danger of losing our perception of form in this disposition to reduce everything to dust. It is particularly our country readers whom we would caution against adulteration and refuse drugs, for it is well known that wholesale dealers keep two varieties of their wares—one for city trade, and the other, they do not hesitate to say, for their country patrons, who desire a cheaper article.

The recently published volume of the Proceedings of the American Pharmaceutical Association, a society which cannot be too highly praised for its constant endeavors to correct these abuses, contains, besides a very valuable and extended report on the progress of pharmacy, by Ferdinand F. Mayer, of New York, and other interesting matter, a report on the drug market, by Edward R. Squibb, the chairman of the committee, which should be read by every physician who cares to know the nature of the medicine he prescribes. We wish that our space would allow us to transfer the whole of it to our pages, but we can only give extracts relating to two of the more important preparations.

"It was deemed best to select a very few prominent articles, examine them carefully by the Pharmacopœia tests, or in some other simple practical manner, and state the results. The members of the Committee in Boston, New York, Philadelphia, and Baltimore, each bought two or three specimens of each of the articles determined upon and sent them for examination. These specimens were purchased from the best usual sources of supply in the several cities. That is, those stores where cheap and inferior preparations were known to be sold, were avoided; and only those from which the best class of pharmaceutists, and the best class of country physicians obtain their supplies, were resorted to. This Committee well knows that preparations of a very low grade can be easily had at all times and everywhere, but that such fairly represent the market for those who desire to avoid them, is not held to be true; and hence the scrutiny was directed only to that highest grade of preparations which are easily accessible to all at what are generally considered to be moderate prices. This course undoubtedly does not represent the whole market, for besides the preparations of low grade alluded to as being both easily obtained and easily avoided, there are classes which profess to come strictly up to the officinal standard, but the high prices and limited use of these forbid their being considered in connection with the general market, and they are in this respect of far less practical importance than the very low grades. . . . . .

"*Æther Fortior.* This is the 'washed,' or 'washed concentrated' ether of the ordinary market, and a much more important article than the last, as it is this grade that generally is, and always should be used for inhalation. Seven specimens were examined. The specific gravities were found to be ·726, ·728, ·731, ·731, ·728, ·735, ·742 and ·728. The officinal direction is that the s. g. shall not be above ·728, and the officinal specimen used for comparison was ·726. Four of the seven are of full officinal strength, and three very much below it, and not differing materially from the common ether first mentioned. The officinal stronger ether now under consideration, contains not over 6 or 7 per cent. of alcohol and water. The three inferior specimens contain 10, 12, and 19 per cent. of alcohol and water. These three specimens, besides deficiency in strength, were all below the standard also in cleanness—two of them very much below it. Of the four specimens of standard strength, one was clean and good, and in all material respects fully up to the standard specimen with which it was compared. From having an alkaline reaction, and a slight odor of lime, it is probable that it was digested upon lime without having been afterwards rectified. Notwithstanding this, it was an excellent preparation, and well adapted to any use. The three remaining specimens of full strength were all unclean; one of them, however, was so near the standard that it may be considered as officinal, though not very nice. The other two are far below the standard and unfit for use. Two specimens of the seven, therefore, may be considered as being officinal and right in all important respects; and five as unfit for use. . . . . .

"*Laudanum.* Eleven specimens, treated precisely in the same way, gave the following results, namely: ·424, ·347, ·343, ·308, ·486, ·468, ·480, ·427, ·340, ·338 and ·357. These figures indicate that one of the specimens is but just about half strength. Five are in the neighborhood of seven twelfths, and the remaining five vary between eight and ten twelfths of the officinal strength.

"These preparations cost 1·00, 1.00, 1·12, 1·00, ·88, 1·06, unknown, unknown, unknown, 1·12, and 1·00 per pound.

"Opium by the case, in the hands of the importers, has brought an average price of at least $8·50 per pound throughout the past year, and this opium in drying loses an average of 20 per cent. in weight, and there are but about 14½ troy ounces in the avoirdupois pound, while each pound of the officinal tincture represents 1¼ troy ounces of dried and powdered opium. Therefore, at the neat case price of opium, the quantity represented in a pound of properly made tincture costs over one dollar. Now, upon the theory that druggists are generally honest, and are selling their tinctures below the neat cost of the principal ingredients, regardless of cost of menstruum, time, labor, and general expenses—to say nothing of profits—this preparation may be all right if the above results of examination be all wrong. But if this theory be too absurd for general credence, then these druggists and pharmaceutists are chargeable in their practice with an amount of dishonesty which, in the shape of a more bold and manly variety of robbery, would be likely to restrict their opportunities of wrongdoing to the narrower sphere of the criminal prisons.

"From this exhibition of the character of six prominent representative preparations from the market of the class to which they belong, it appears that although not one of them comes fully up to the officinal standard, yet that, by a liberal admission, two of the most important ones may be considered to be nearly right, and to be progressing in the right direction of becoming entirely right. The three important ones of the remaining four, however, exhibit a low character, discreditable alike to the professions of medicine and pharmacy, and to human nature in general; and those pharmaceutists whose moral perceptions at this day are left keen enough to appreciate the condition of their art, and whose energy is sufficient, certainly have a most enviable reputation and standing within their reach, by opposing the condition of things thus indicated, through what appears to be the rarely trodden path of moral rectitude. Let some of us, then, try how it will pay to be right where many are wrong, and try what the profits of such a new drug market will be."

While the Pharmaceutical Association is doing so much for its own good and that of our profession, we also may accomplish much in the same direction by a uniform line of action. We should make it a rule to send every prescription we write to apothecaries of high skill and standing, of whom there are many among us; men who make most of the preparations they dispense, and whose knowledge and integrity are a sufficient guaranty of the character of their stock.

Messrs. Editors,—I wish to call the attention of the profession to the use of a saturated solution of chlorate of potash in equal parts of muriatic acid and water as a *diuretic* in scarlatina. I have been in the habit of using this remedy in this disease, according to Watson's recommendation in his work on the practice of medicine, for more than fifteen years, and for most of that period I have noticed that where paucity of the urine existed, a more abundant secretion took place on exhibition of this medicine; and during the past winter, and up to the present time, I have used it for a diuretic in some twenty cases, without having been disappointed in any instance. I begin to use it at any stage of the disease, administering it every four or six hours in sugared or gum-Arabic water, in such doses that a child five years of age would get one and a half drops of the acid at each dose; and in a few instances I have used double such quantity, with benefit. The beneficial use of this remedy for correcting fœtid breath in scarlet and other adynamic fevers, is well known, and its *modus operandi* easily explained, but how it acts upon the kidneys is not so readily understood; it must be indirect, I think, by first altering the condition of the blood, fitting it, as it were, to pass off by those organs, rather than as a direct stimulant to them. All of us are familiar with the fact, that albuminous urine frequently occurs during and immediately after scarlet fever; whether or not the use of muriatic acid, for I presume it is this agent, and not the combination with the chlorate of potash, that acts as a diuretic, will prevent such state of the urine, I cannot say, but my experience thus far seems to favor such a view. I never have used the medicine when I knew by examination that albuminous urine actually existed; my use of it has been confined to the first ten days of the disease. In rheumatism and anasarcous conditions of the system following scarlatina, I have relied upon another class of remedies, other than diuretics, with a success entirely satisfactory. I have now two patients, brothers, fairly convalescent, to whom I ordered the acid mixture (in the largest dose), and it was used from the fourth to the seventh day of the complaint, with such effect upon the urinary organs that quite a diuresis continues, although five days have elapsed since the remedy was discontinued. In most of the cases improvement in the urine took place within twenty-four hours after commencing the medicine.

Pawtucket, R. I., March 22d, 1864. JAMES O. WHITNEY, M.D.

DEATH OF DR. BENJ. CUTTER.—The death of Dr. Benj. Cutter, of Woburn, will be deeply felt in the community of which he had so long been a prominent and valued member. He had been feeble for a considerable time before his death, but his last illness was of short duration. Dr. Cutter was born in West Cambridge in 1803, and graduated at Harvard College in the class of 1824. He studied medicine with Dr. Francis Kittredge, of Woburn. Many valuable contributions from his pen will be found in former volumes of this JOURNAL.

IN reply to the inquiries of "A Student," we are able only to inform him that applicants for admission to the U. S. Navy as Assistant Surgeons or Acting Assistant Surgeons, must make application to the Secretary of the Navy, giving their residence, date and place of birth, together with respectable testimonials of moral character, and that they must not be less than 21 nor more than 25 years of age. Other information can doubtless be obtained of the surgeons stationed at either of our Navy Yards.

DR. CHANDLER'S article will appear in our next number.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, MARCH 26th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	49	42	91
Ave. mortality of corresponding weeks for ten years, 1853—1863,	40.9	35.8	76.7
Average corrected to increased population - - - -	00	00	84.28
Death of persons above 90 - - - - - - -	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
18	3	5	3	2	0	1	1

DIED,—In this city, March 22d, Dr. John Nelson, aged 74 years 6 months. Dr. N. was the father of the late Hon. A. H. Nelson, formerly Judge of the Superior Court.—At East Cambridge, March 27th, Dr. Moses Clarke, aged 46 years.—In Philadelphia, March 19th, Dr. Franklin Bache, aged 72 years. The deceased was the oldest great grandson of Benjamin Franklin. At the time of his death he was Professor of Chemistry in the Jefferson Medical College, which position he has held since 1841.

DEATHS IN BOSTON for the week ending Saturday noon, March 26th, 91. Males, 49—Females, 42.—Apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 3—inflammation of the brain, 3—bronchitis, 4—burns, 1—cancer (of the liver), 1—caries of the shoulder-joint, 1—consumption, 18—convulsions, 5—croup, 3—debility, 1—diphtheria, 1—dropsy of the brain, 1—scarlet fever, 5—typhoid fever, 1—gangrene (of the mouth), 1—hæmorrhage, 1—disease of the heart, 3—infantile disease, 2—disease of the kidneys, 3—laryngitis, 1—congestion of the lungs, 2—inflammation of the lungs, 3—marasmus, 4—measles, 2—old age, 1—paralysis, 2—peritonitis, 1—puerperal disease, 1—smallpox, 2—disease of the spine, 1—suicide, 1—syphilis, 1—unknown, 7.

Under 5 years of age, 35—between 5 and 20 years, 9—between 20 and 40 years, 23—between 40 and 60 years, 14—above 60 years, 10. Born in the United States, 58—Ireland, 25—other places, 8.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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CASES ILLUSTRATIVE OF OBSTETRIC DISEASE.—DEDUCTIONS CONCERNING INSANITY IN WOMEN.

By Horatio Robinson Storer, M.D., of Boston, Surgeon to the Pleasant Street Hospital for Women.

[Communicated for the Boston Medical and Surgical Journal.—Continued from page 74.]

Case VI.—*Melancholia. Suicide during the Catamenial Molimen.**—A few weeks since I was called to see Mrs. ——, by her attending physician. The lady was a resident of another State, and had come hither for treatment. She was of easy circumstances, and had borne several children. The catamenia of late had been somewhat irregular as to interval, and scanty, but were otherwise normal in character. The general appearance of the patient was cachectic, her skin of a muddy tinge, though without decided jaundice. In the right hypochondrium there was a well-defined tumor, of perhaps the size of the fist, not particularly tender upon pressure. Thoracic examination revealed nothing at fault, while vaginal exploration was almost equally negative.

I had been informed that there were present, and had been for some little time, symptoms of despondency and hypochondriasis, and upon conversing with her I found that they had not been at all exaggerated. She freely acknowledged that she was tired of life, had no desire ever to see her children or friends again, &c.; so that there was no hesitation in our minds as to the necessity of rigid and constant supervision. There were reasons why it was thought best that Mrs. —— should not be sent to an asylum. She was therefore placed in the charge of a trustworthy attendant, who was to leave her at no time wholly by herself; the sole exception to this rule being that this person was allowed to sleep in an adjoining apartment, through which was the only exit from the patient's chamber, the keeper's bed being so placed that it could command a full view of the interior of that room, the door between being left open at night. Every precaution was supposed to be taken to prevent the patient from getting into her possession any knife, ligature or other article possibly available for suicidal purpose.

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* The above case was reported at the December meeting of the Suffolk District Medical Society, and was read, with remarks upon the importance of its medico-legal and other general relations, before the American Academy of Arts and Sciences, on Feb. 9th, 1864.

Early on the morning of Dec. 13th, a little over two weeks after our consultation, I was summoned to the neighboring city where Mrs. —— had been placed. I found her lying in bed, dead, and the body cold; the surrounding circumstances being such as to allow no doubt that she had yielded to the morbid impulse which had been impelling her from life. As the act was an unusually deliberate one, and its several details were successively and clearly to be traced, I shall give them at some little length; the case being of importance in its bearings upon certain obscure medico-legal and pathological questions, the value of which have not yet been fully appreciated by the profession.

The body was clothed in night dress, flannel drawers, and stockings without garters. The bed clothes and feather bed were thrown over the foot of the bedstead, an iron one; so that the body rested upon a hair mattrass, under which was another of straw. Beneath the neck and head, which was thrown back, was a single pillow. The position of the body was perfectly easy and natural; the head slightly thrown back as aforesaid and a little turned to the right side; the countenance pale, but without contortion; the mouth and eyelids open; the hair loose, but not dishevelled; the left arm lying beside the trunk, the hand slightly bent inward; the right arm gently flexed upwards, the hand lying just outside of the outer edge of the pillow upon the side of the bed next the wall; the lower limbs were extended. The night gown was unbuttoned above, but pinned with a single pin half way down the opening in front; its lower edge decently down over the knees.

Across the throat, transversely, and commencing just beneath the chin, were eleven distinct incisions, extending lower on the left side than on the right. Of these one only, the undermost, did more than penetrate the skin. This last incision was situated an inch and a quarter above the sternal extremities of the clavicles; it was an inch and a half in length, and extended down to and opened the trachea, entirely dividing the sterno-mastoid muscle on the left side and the vein, but left the carotid apparently uninjured. This incision seemed to have been effected not by a single stroke of the knife, but by a repeated and sawing motion.

A broad stream of clotted blood extended across each supraclavicular space, connecting on the right side with a large pool of the same near that shoulder. A single and narrow blood streak from the mouth downwards over the lower lip and chin, evidently from coughing, the blood having entered through the wound in the trachea.

Another incision, two inches in length and ragged, existed across the inside flexure of the left elbow; the arm being extended, it gaped widely. This arm was covered with blood stains, a wide but dry streak extending down below the forearm and upon the back of the hand, but not soiling the mattrass upon which it lay, nor was there a pool near the elbow. The night dress was smeared throughout in front with irregular blotches, but there was no blood upon the drawers, nor upon the stockings, save upon their feet, which were closely spotted above, and with irregular blotches beneath upon the soles. There was bound between the thighs a napkin, showing that the catamenia were expected, but it was unsoiled.

Upon the floor, near the bed, were the following articles. Beneath the bed at its lower extremity, the chamber vessel partly filled with urine, upon which was floating the match with which the patient had lit the gas; above, the cover, slightly spotted upon its outer side. Near the foot of the bed lay the night cap, garters and slippers, which were carefully placed side by side; these were all unspotted, save the soles of the slippers. Beside the bed, in a median position, stood a chamber slop-pail, its sides very much stained within but hardly at all without, and about one third filled with bloody water. Upon one of its sides, hanging partly within and partly without, was a towel saturated with blood. Near this pail and just above it, its long axis at right angles with the bed, lay an ivory-handled carving knife, covered with blood. Some little distance above this, a large feather pillow rested against the wall, unstained save by the single grasp of the bloody hand that had removed it; the same mark was also visible upon the bed clothes that were thrown over the foot of the bed. The pillow just described rested also against a small, hour-glass shaped work table, upon which was a leather work bag. In a rocking chair, half way from the bed to the left hand window, lay the patient's clothes, her under clothes uppermost. In the corner next beyond this rocking chair was a trunk partly open, containing clothing, &c., and against this a chair, supporting similar articles that had apparently been taken from the trunk. Upon the dressing table were a variety of articles—writing case, paper box with sewing materials, match box, combs and brush, rings, net for hair, false teeth, belt ribbon, paper of pins, various letters, photograph of her husband, portemonnaie, pen and ink, a piece of bloody waste paper, and a cup containing blood and marked outside by a bloody hand.

The carpet was largely stained just around the slop-pail, the marks being here suggestive of a sudden gush, with a succession of drop marks hence to the table, upon the table, to the door into the next room, on the right of the table, and to a closet at its left, where the slop-pail was usually kept, and upon a flannel petticoat lying between the table and this closet, and near the rocking chair upon which were the other clothes of the deceased. A small pool of blood was in the corner of the closet, and there was the print of bloody fingers upon the handle of the door into the next room.

From the above statement, it is evident that Mrs. ——, having taken off her rings, contrary to her usual custom at night, first opened her arm with the carving knife over the cup upon the table; that she held the cup up to the arm and then replaced it; that she walked to the door of the adjoining room and shut it, and thence to the closet for the slop-pail; that then, very likely feeling a little faint, she returned with the pail to her bed; that she first removed her slippers, night cap and garters, took the pillow from the bed and placed it against the wall, turning the bed clothes over the foot-board; that then finding the blood ceasing to flow from the arm, she endeavored to excite it again by sopping the wound with the towel. Finding this impossible, she sat down upon the side of the bed, and after repeated efforts succeeded in opening one of the veins of the neck; then dropping the knife, she fell back faint upon the pillow, and died from venous hæmorrhage.

Had the carotid artery been cut, there would have been present, as has been well shown by Dr. Swinburne, of Albany, in his most elaborate investigations upon this subject,* unmistakable signs of profuse arterial hæmorrhage. In these cases not merely are the surrounding objects covered by the blood, but its spout or jet is so great as to reach the walls of the room or even the ceiling, or if not, it assumes the curve of a parabola and strikes the floor at a distance of several feet. In the case now reported, on the contrary, the vital fluid *ran* out merely, as is the custom in all instances of simply venous hæmorrhage.

At the autopsy, I found the colon displaced downwards, as has now so often been noticed in cases of insanity; whether merely coincidently or not, is still an open question. In this case the bulk of the large intestine was crowded into the right iliac fossa. The pancreas was somewhat enlarged, and the pylorus apparently a little thickened. The gall-bladder was filled with inspissated bile, decolorized and almost puriform in appearance, and was crowded with gall-stones; thus having occasioned the tumor perceptible during the course of the disease. The other organs were healthy.

Upon inquiry, I was informed that Mrs. ——'s catamenia had been due for several days, and that she had evinced a corresponding increase of mental depression, that she had expressed fears lest she should again be sent home to her family and its cares, and that upon several occasions after the commencement of the molimen, and just previous to the night of her death, she had practised self pollution, confessing it soon afterwards with evidence of disgust and regret. Before retiring to bed upon that evening, she had particularly requested that her attendant would not disturb her in any way before morning, as she felt unusually tired and inclined to sleep.

From the past history of the case, there could be no doubt that the death was from self-destruction, and that this was committed during a paroxysm of insanity; that the mental derangement was primarily occasioned by the hepatic disturbance, being very much aggravated, both primarily and secondarily, during the catamenial period. Under other circumstances, taking into account the extreme deliberation with which the whole matter had been planned and executed, and the almost inconceivable tolerance of pain necessarily implied by supposing it the victim's own act, it might have been very natural for suspicions to have been entertained of murder. Every step, however, in the whole chain of events was with perfect clearness and regularity to be traced, from the first inception of the suicidal thought. First, the secreting the knife, the persuading the keeper from her usual close attendance, then the lighting the gas, closing the door, preparing her person and arranging the bed and its surroundings for the fatal close.

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* Review of the Budge case, with an appendix exhibiting the symptoms in fifteen cases of suicidal death by cutting carotid arteries. Albany. 1853.

There are two points, as I have already intimated, presented by the above history, that are of decided importance, both scientific and practical. I shall very likely take occasion to present my views upon both of them hereafter, at greater length.

I. The suicidal impulse reached its maximum and became effective at the catamenial period; and, II., as has been frequently noticed in insanity by those more especially charged with its management, there was a peculiar and excessive tolerance or non-perception of pain, which permitted the patient to saw her arm open and to cut eleven separate gashes upon the throat, without the occurrence of a groan, or a struggle, or the deviation by a hair's breadth from her pre-determined purpose. Upon such a supposition, and such only, can we account for many occurrences, otherwise inexplicable, among the insane; such as the discovery after death of fractures and dislocations, as of ribs, &c., which had not been suspected during life, and from which there had been neither complaint nor the ordinary physical signs of suffering.*

The existence of these facts I have long been inclined to suspect. They have but received confirmation from the singular opportunities of observation of late afforded me as one of the State Commissioners in Insanity, and I freely acknowledge my great obligation to the officers of many insane asylums, not in our own Commonwealth merely, for ready assistance in these investigations and for intelligent counsel.

As one of the results attained, I think I may enumerate the following as general laws. They are of especial interest to the obstetricist as opening up to him a fruitful and comparatively untrodden field of practice; and are also of exceeding importance to the medical jurist and to all others interested in the workings of criminal law. So far as I am aware, and I speak from somewhat extended familiarity with the writings of alienists, the ground they cover has as yet been but very imperfectly defined.

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* This latency or suppression of the physical signs of suffering and disease in the insane has been very thoroughly studied, and demonstrated in a long series of *post-mortem* examinations, by my friend Dr. Workman, of Toronto, Superintendent of the Upper Canada Lunatic Asylum. Amer. Journ. of Insanity, April, 1862, p. 349; &c.

1. In women of insane tendency, accidental or by inheritance, the access of insanity, its increase and its results, are more likely to occur at times of uterine or ovarian excitement, whether periodical or normal, or from disease. Just as we constantly see hysteria, more or less marked, at such times, we occasionally find the mental irritation so great as to constitute actual alienation, whether as mania, monomania, melancholia, or the so-called moral insanity.

2. In women, mental derangement, even of extreme character, is very commonly the consequence of uterine or ovarian derangement, however trifling; occurring at puberty, at the grand climacteric, or at any point between them—during virginity, during gestation, during or after labor or during lactation—from excessive sexual gratification or excessive sexual abstinence, from self-abuse, from organic or functional local lesion.[*]

3. So large a proportion of the mental derangements of women being sympathetic and reflex and referable to local derangements, herein differing from what obtains in men, where insanity is more frequently of centric and cerebral origin, there is decided indication for local curative treatment much oftener than it is now resorted to in cases of insane women, either at asylums or in private practice.[†]

Some special points regarding the insanity of women have, it is true, been very thoroughly worked up, perhaps time and again, as in the instance of puerperal mania, which, though in itself so important, is, however, but a single division, and comparatively a very trifling one, of that great subject to which I would call attention. I have hardly found in general treatises upon insanity, or in the interesting monographs with which the periodicals devoted to this specialty abound, more than a hint,[‡] scarcely even that, of the dogmatas, to which I have been compelled by long and careful observation of sick women. In support of this statement and as but a single instance of the very many which I could adduce, I will refer to the long and otherwise complete essay upon "Woman in her Psychological Relations," by Dr. Forbes Winslow, in his *Psychological Journal* for Jan., 1851. Even Dr. Ray, of Providence, confessedly *expertissimus expertium,* to whom I am indebted for most interesting personal demonstrations of many points connected with the management of the insane—even this gentleman, in his late thoughtful and exhaustive treatise upon Mental Hygiene, while acknowledging the immense frequency of ill health among American women, and its evident connection with insanity, seeks to explain both these results, almost exclusively, by overwork,* necessary in the poor, self-imposed in the wealthy—overlooking or ignoring the great causes lying beneath overwork, upon which I would lay such stress. Some of these causes I have already called by name, but it would be indeed false delicacy and actual cowardice not to hold up as chief among all the predisposing and effective causes of uterine ill health among us here in New England, the so frequent induction of criminal abortion, the so frequent intentional prevention of impregnation, by women, married and unmarried, who have been exposed to its occurrence.

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[*] The above facts being true, it may well be asked, as has already been done by Sedgwick in the case of pregnant women (Psychological Journal, Oct., 1863, p. 694), whether the legal responsibility of women at the physiological epoch and during the local derangements I have just mentioned should properly be considered as entire and unabated. We men, fortunately spared, in our own persons, experience of the extreme and almost boundless reflex phenomena that they present, may well grant them at such times some immunity from the extreme punishments otherwise required by violated law.

[†] To various obstacles that have always existed, and to a certain extent must necessarily do so, preventing superintendents from using with their female patients, upon their own responsibility, methods of treatment that they would otherwise gladly carry out, I may more fully allude in a subsequent communication. The Commissioners in Insanity have endeavored, in their late report to the Legislature, partially to obviate these difficulties. by recommending that the trustees of the State hospitals be empowered to appoint to each a board of consulting physicians, who may be called upon at the discretion of the superintendent.

[‡] I would again, in this connection, call attention to the careful examinations and acute suggestions of Dr. Workman, of Toronto, who has been much nearer appreciating the truth in this matter, it would seem, than any other of our American observers. Amer. Journal of Insanity, July, 1858, pp. 19, 23, and July, 1859, p. 8; Report of Provincial Asylum, 1860; Amer. Journ. of the Med. Sciences, April, 1863, p. 437. Bucknill has incidentally alluded to these lesions as causative of insanity in women, in his paper upon the Pathology of Insanity, reprinted in the Utica Journal for April, 1858, p. 363—as has also Robinson, of Gateshead, in his work upon the Prevention and Treatment of Mental Disorders, p. 116. The above remarks that I have made apply more especially to those charged with the care of the

It has often been stated that her sex *did not* have anything to do with the causation and development of insanity in woman. These loose assertions have generally been based upon statistics drawn from the number of admissions to lunatic asylums, or from the relative proportions of the insane given from the census, which for obvious reasons are not to be relied upon as the basis of a general argument.

To the above deductions I may add the following: that in medico-legal investigations, whether they are coroners' inquests, trials for homicide, or for the abuse of insane patients in confinement, it must not be forgotten that the insane, so far as regards matters of sensation, whether as to effects from wounds or from acute or chronic disease, are not to be judged by the ordinary physiological laws.

This last statement must not be regarded by superintendents as a two-edged sword; for while no doubt it may admit a more frequent possibility of accident during measures of needful restraint, however slight, than has been generally acknowledged, and would invite greater and more constant precaution upon their part against such mischance, it will also relieve them from any suspicion or unfounded odium that may have existed, implying unnecessary violence, carelessness of observation or general neglect of patients by hospital attendants and employees.

The occurrence of the sensational torpor which I have now de-

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insane; on the other hand some obstetricians, as Gooch, Tilt and others, have long had suspicion of the causes actually at work.

* Loc. cit., pp. 54 and 293.

scribed, and of whose existence among the insane too many instances have been reported to allow a doubt, although its value may have been misunderstood at the time, or but partially appreciated, is the more interesting as tending to throw light upon one of those tremendous charges just made against the officers of private lunatic asylums by Charles Reade, in his late novel entitled "Very Hard Cash." It is there asserted that, in England, during the struggles which are apt to occur even in the best regulated asylums, with cases of furious mania, the keepers are in the habit, after having thrown the patient, of disabling him by trampling upon his body with their knees, during which procedure, ribs, it is said, may be fractured, without external or other sign of violence. The frequency, in Great Britain, of such results, in some way or another induced, is shown by a reference to even the very last of the reports of the English Commissioners in Lunacy. To give to such possibility its full and indeed only explanation, the theory must be accepted that has just been advanced. In public asylums, where, it is almost unnecessary to say, abuses of the kind referred to can hardly take place, instances of latent fracture or other surgical lesion, save from self-injury, are comparatively rare.

Whether this physical anæsthesia is more common with women than with men, and to what extent its occurrence may explain the so frequent desire among the insane to mutilate and otherwise injure themselves, are subjects that as yet seem to have been entirely uninvestigated. Of its occurrence I have seen some remarkable examples, and others have been reported to me by my friends in this specialty. Dr. Ray, for instance, was kind enough to point out to me a case under his charge at the Butler Hospital, where the patient was in the constant habit of biting her own arms, so that they had become, from long injury of this kind, almost elephantiatic in appearance. Dr. Walker, again, of the City Asylum at South Boston, has communicated to me another case where the girl gnawed away and almost devoured her lower lip; a third, where the patient ripped up her own abdomen, as in the Japanese haro-kari; and a fourth, where pins were thrust into the eyeballs—in each instance without the slightest manifestation of physical pain.

Upon the other subject to which I have called attention, the causation of insanity in women, I wish to be distinctly understood. It has been stated by my friend, Dr. Edward Jarvis, whose long experience both as an expert in insanity and as a statistician, render him most competent to judge, that mental alienation as an abstract occurrence, is more common among men than in women, in consequence of the greater exposure to innumerable exciting causes, more especially of a mental nature, to which men are liable. That this may be true, I do not at present deny, and would add to the reasons alleged by Dr. Jarvis in support of his theory two others; namely, the preponderance of male births that generally obtains, even though this is kept down to a certain extent by the other of the influences to which I refer, the increased compression to which the head of the male child, from its larger average diameters, is subjected during labor —the results of this compression being seen not merely in a proportionate excess in males of still-births, and of convulsive diseases during infancy, but in certain cases, of irritability of the brain in after life. These cases, however, are probably more than balanced by an intrinsic and ante-genital irritability of the nervous system generally in the female.

Nevertheless, the point to which I have now alluded being for the present conceded, my own is a very different one, and not all conflicting with it. I hold that, be the cases of insanity in females more or less in number, they are in great measure of reflex character, their exciting cause capable of being localized, and therefore, in a large proportion of cases, of being removed by treatment. In this connection, I am of decided opinion that were the post-mortem examinations of the insane, now on record, to be carefully collected and tabulated, on the large scale and without regard to the special purposes for which they may have been reported, it would be found, due regard being had to the restrictions below stated,

1. That organic cerebral disease is far less common in insane females than in insane males.

2. That organic uterine or ovarian disease exists very much more frequently in these cases than has been supposed. And—

3. That where this is absent, and functional uterine or ovarian disturbance is inquired for, it will very constantly be found to exist. The only error hitherto having been that these, when detected, have been supposed the consequence of the cerebral disturbance, rather than, as is proved to us by every-day practice, the exciting cause.

The faulty way in which a very large part of the published autopsies of insane patients have been reported, cannot fail to strike the most superficial observer. Search seems generally directed only towards the brain, all lesions there found being considered of necessarily primary character, the abdominal viscera being either not examined or the result of such examination being left unstated; so that such examinations, which constitute the larger portion of those published, must be thrown aside in the present inquiry. They are worse than useless; they afford no evidence whatever of any practical value, either positive or negative, and are merely instances of neglected opportunity.

It would be easy for me to prove these, as all other statements that I have made in this communication, to the most rigid demonstration. I shall content myself, however, by a single sentence from a paper upon the morbid anatomy of the brain in insanity, by a late demonstrator of anatomy at St. Bartholomew's Hospital, Mr. Holmes Coote, of London. It is the more strikingly appropriate from having been written without any appreciation of the importance of the facts to which I have called attention.

"Many who have professed familiarity with these subjects, have asserted that the morbid appearances found in the bodies of the insane were unworthy of record; they should rather have confessed that they were unable to appreciate their value. With the more thorough and complete investigation of these matters, we may hope eventually to arrive at some correct views as to the nature of those laws, the transgression of which leads to sensorial disturbance, but no approach to the truth can be made, except through the portal of morbid anatomy, which has revealed this important fact, that the record of post-mortem examinations, as preserved in an asylum for the insane, differs in most striking and essential particulars from that preserved in a general public hospital."*

In claiming for insanity in women a more frequent origin from uterine disturbance than has been hitherto recognized, I trust that no one will be careless enough to suppose that I consider uterine lesion must necessarily be followed or accompanied by mental derangement. Such a statement would of course be absurd, just as on the other hand it would be for a general pathologist, who had had little or no experience in examining the insane, to deny in such cases the existence of the connection to which I have called attention.

Nor should it be forgotten, as seems to have been done by many physicians with whom I have conversed upon this subject, that the term insanity does not necessarily imply a state of furious mania, with symptoms of cerebral inflammation, which indeed I am inclined to think is rarer in females than in men, as certainly it should be in case my views are correct. We should find, as I think we do find, cerebral inflammation rare in women, cerebral irritation common. It is the experience of all who have much to do with sick women, that many of their mental attacks are periodical, coincident with the menstrual molimen—a class which I would distinguish by the term catamenial mania, just as that occurring at childbirth has been termed puerperal. It is comparatively seldom, for several reasons, that these cases are sent to an asylum, even when the mental disturbance is extreme, unless it is accompanied by a tendency to suicide. Who is not familiar with the varied phases of despondency, jealousy, erotic desire, the habits of lying, stealing, and other deceit, &c. &c., at these and other times displayed by women who are called and treated as merely nervous, only through mistaken pity or a desire to shield their friends. Such cases, if judged by the rules so rigidly applied to the actions of men, would fill far more asylums than now exist. They are cases which prove the truth of my theory.

I have already referred to the opinion entertained by one eminent writer, Dr. Ray, as to the general exciting cause of insanity in women. In a still later publication than his Mental Hygiene, although that is yet hardly dry from the press, he has expressed himself more broadly, and I think far more pertinently. I now refer to his late Annual Report of the Butler Hospital for 1864. Dr. Ray here enters deeply into the general question of the causation of insanity, and without hinting at the possible existence of the great laws I would now establish, attributes to insanity an almost necessarily hereditary origin. "The course of our inquiry," he avers, "leads us to this conclusion, that in the production of insanity there is generally the concurrence of two classes of agencies, one consisting in some congenital imperfection of the brain, and the other in accidental outward events. I do not say that mental disease is never produced by the latter class of agencies exclusively. The present limited state of our knowledge forbids so sweeping a conclusion. Cases sometimes occur where the closest investigation discloses, apparently, no cause of cerebral disorder within the patient himself. There is good reason to believe that the number of such cases would be lessened by a deeper insight into the inner life and a minuter knowledge of those organic movements which lead to disease."*

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* Journal of Psychological Medicine, vol. iv., p. 384.

The two last sentences now quoted, as applying more especially to women, I accept most fully, in all their meaning, giving to them a far deeper signification than was intended or even probably thought possible by Dr. Ray. The number of so called unaccountable cases, now existing in our insane asylums, and yearly tabulated in the statistics of their reports as from an unknown cause, those mentioned as disappointed ambition—I am now quoting from a table in one of the very last of the asylum reports I have received—unrequited affection, maternal anxiety, religious excitement, domestic affliction, despondency, hysteria, ill health, or even as epilepsy, which in so many instances is but a symptom of some or another local disorder, would indeed "be lessened by a deeper insight into the inner life and a minuter knowledge of those organic movements which lead to disease."

Like Dr. Ray, I would acknowledge two great classes of agencies in the causation of insanity in woman. The one, a congenital, or, as I have called it, ante-genital tendency to functional excitement or even disturbance of the brain upon certain local developments, excitements or disorders—a tendency innate and peculiar to her sex, though often latent and unrecognized through life—and yet perhaps giving to her that excessive emotional impressibility which, within its normal bounds, is her peculiar attribute and charm. The other, not accidental, outward events—not hard work, nor domestic trouble, though I would by no means ignore the occasional occurrence of these and many similar agencies as correlative or even efficient exciting causes—but the possession of an inner mechanism, a central force, around which all her other systems and functions turn, and to which they are in reality, to a certain extent, but subsidiary—so subtle and so easily disarranged by even slight external causes, that the real wonder is not that so many women are invalid, but that any are well. "*Propter uterum*," said Van Helmont, "*est mulier.*" I would not so far commit myself as to accept his statement in all its bearings, but I have no hesitation in averring that in the uterus we shall find the key to many a case of mental malady, a most efficient "cause of cerebral disorder within the patient (her)self."

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* Loc. cit., p. 30.

These several points I commend to the close scrutiny, confirmatory or contradictory, both of the profession at large, and of the specialty devoted to the study of the insane. I think I am already sure of the support of the latter; I have little doubt that the former also will, upon investigation, as heartily acquiesce in the acceptance and general adoption of my formulæ.

CASE OF CEREBRO-SPINAL MENINGITIS.

[Reported to the Boston Society for Medical Improvement, March 28th, 1864, and communicated for the Boston Medical and Surgical Journal.]

By George Hayward, M.D., Boston.

The patient was a little boy, about 5 years and 11 months old, attending one of the public schools; he had been well fed and clothed, his parents being in easy circumstances, and had undergone no particular fatigue or exposure. He was not a very robust child, and had had, during the winter, a succession of colds; but, on Saturday morning, March 27th, seemed to be as well as before, and went to school as usual. After his return from school, about 12½, P.M., he told his father that he "had a bunch on the back of his head," and complained of being cold. His father could find nothing unusual about his head, and took him to his mother's room, where he was wrapped up warmly and placed in a chair by the fire. He still complained of pain in the head and chilliness, but ate a pretty hearty dinner, which, however, he vomited up not long after. At 5, P.M., he was put to bed, and the headache, with a feeling of general restlessness and distress, continued to increase, accompanied by occasional nausea, until 11, P.M., when his parents noticed that his mind was affected.

Things continued in this way, with the addition of considerable difficulty of breathing, until 1, A.M., on Sunday, when I was sent for and saw him soon after. I found him lying upon his back in bed, with a dark, pale, almost livid countenance; pupils of eyes much dilated and insensible to light, and the vessels of the conjunctiva very much injected with blood; pulse 120, soft and easily compressible; respiration labored and hurried; and on placing my ear on the lungs they seemed congested, as if the bronchial tubes were very much obstructed by fluid. On examining his skin to see if there were traces of any eruptive disorder, I found upon his left arm, near the shoulder, several small round dots of a purplish hue; the largest not being bigger than a pin's head, and a few more, less marked and smaller, were found upon the forearm and body. I called his mother's attention to these spots, and continued to watch them through the night, as they seemed to me to be different from anything I had ever seen before.

As soon as it could be made ready, I applied a large mustard poultice over the whole chest, and after a time the breathing became less rapid and laborious. His pulse soon became very feeble, so that, at times, it could not be felt at the wrist, and I gave him hot wine and water, brandy and water, and wine whey, and applied flannels wet in hot brandy to his bowels, and a jug of hot water to his feet. After a time his pulse improved, the dilatation of the pupils ceased, he appeared to understand when spoken to clearly and distinctly; he tried to speak himself, and did articulate imperfectly a word or two.

About this time he had a discharge from the bowels in the bed, but his mother thought that it was not altogether involuntary, and that he had tried to give notice of it, but was unable to make himself understood.

As, from what was said to me, I thought that he had taken something in the afternoon which might be injurious to him, I gave him an emetic of powdered ipecac which vomited him after some time. He had before this shown symptoms of nausea, but did not seem able to vomit.

The remedies above spoken of were continued, the mustard poultices being applied occasionally to the chest, stomach, bowels, and back of the head and along the course of the spine, and the stimulants administered frequently in such quantities as he could be made to swallow.

In the mean time the patient was getting worse; he seemed to lose all consciousness of those about him, and a purposeless jactitation came on, causing him to toss without object from side to side of the bed. I noticed a tendency to throw the head back, and also that he had at times distinct spasms, causing him to stiffen his arms and clench his hands, set his teeth and roll his eyes up; I saw at no time any strabismus, or frothing at the mouth. The dilated state of the pupils I noticed at first, may have been caused by his just having come out of one of these spasms, without its being noticed, as the eyes had usually an unnatural look after they had passed.

The decubitus at this time and for the remainder of his life, was almost entirely upon his side, usually his right side.

The small round purplish spots which I noticed on the left arm continued to increase in size, and to come out in great numbers, reminding one of the way the stars come out as night draws on, new ones constantly making their appearance. They were for the most part round, clear and distinct, not raised above the skin, and seeming to increase independently, and not by coalescing with each other. There was upon the right fore-arm an irregularly-shaped blotch, very like purpura, about an inch long by one third of an inch wide; and there were several more like this on the body and limbs, but they were the exceptions.

There is but little to add to the case, except that the spasms became more frequent and severe, the tendency to opisthotonos greater, the spots more frequent and larger, and the difficulty of making him swallow his nourishment, to which beef-tea had been added, much greater.

In the course of Sunday forenoon I became convinced that this was a case of cerebro-spinal meningitis, such as had occurred among our soldiers at Newbern, N. C., and that it would soon prove fatal. This opinion I communicated to Dr. Storer, who saw the patient in consultation with me; and, after a careful examination of the patient, he concurred in it entirely.

I then wrote a note to Dr. J. Baxter Upham, requesting him to see the patient, as he had had so large an experience in such cases. Dr. Upham did so, and pronounced the case one of cerebro-spinal meningitis, precisely such as he had treated at Newbern, and, moreover, a very bad form of that disorder.

Dr. Upham noticed the same tenderness at nape of the neck which he had observed in the cases at Newbern. By his advice cloths wrung out of hot water were applied to the back of the head and spine, and these, frequently renewed, were continued until a short time before his death, which took place at 5½, P. M., March 27th, his whole illness having lasted about thirty hours.

I am sorry to say that I was unable to obtain a *post-mortem* examination.

CEREBRO-SPINAL MENINGITIS.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—I send you a brief article for the benefit of your readers—or rather, hoping it may *prompt* one, on the subject of the so-called "spotted fever," or, as some term it, "cerebro-spinal meningitis." The question with me is, is the disease, *so* called, and now prevailing in some localities, identical with the "spotted fever" of 1812–13, and onward? This was also called, I think by Dr. Gallup, of Vermont, "typhus syncopalis." My own recollections of that fever (I was then 19 years old, the son of a physician in large practice, and though not then a medical student, I saw much of the fever) are, that it wore a very different aspect from the cases now described as "spotted fever." One incident, occurring to myself at that time, I should beg pardon for relating. I spent the winter of

1812–13 in a town some fifty miles from home, where the epidemic was sweeping off many every week, and all were alarmed. I was alone, in a lawyer's office, where I *lodged* also, and at 8 o'clock, P.M., was taken suddenly with a sense of depression, mental and physical, with intense, undefinable suffering, without obvious cause, and unprecedented in my own experience. I had understood that something like this denoted the onset of the disease, and being greatly alarmed, I stepped into a shop, only a few doors distant, and procured a pint of *unreduced* cogniac brandy, having understood it was the most reliable remedy for the fever. I commenced drinking it at once, taking, probably, two thirds of it, from 8 to 12 o'clock, then taking my bed, passing a nearly sleepless and restless night, rising early, and taking the remainder of the brandy before going to my breakfast. I was not then accustomed to ardent spirits, and am sure that, ordinarily, one *eighth* of the quantity would have produced gross intoxication. I felt no such effect from it, but through the day gradually regained my strength and spirits, and at evening was well. On my return home I related the incident to my father, who thought "the sensations I described *might* have denoted the accession of the fever, *that* condition of the system preventing the *usual* effects of the brandy, thus *possibly* arresting or curing it. *Per contra.* The apprehension and extreme terror *might* have been such as to prevent intoxication, without the help of the disease." But now for my case—a single one, and *all* I have seen.

Having been occupied for the last ten months in the discharge of duties outside of the ordinary practice of my profession (on a Board of Enrolment), I had seen nothing, and read little of the so-called "spotted fever," or, as some call it, "cerebro-spinal meningitis," the latter seeming to myself, at least, a less objectionable name. In Vermont, and in other States, I learn that it has prevailed considerably. It has been *variously* described as making its onset suddenly, with intense pain in the head, chills, vomiting, restlessness, pains in back and extremities, prostration, collapse, the head thrown back on the spine, and the latter bent like a bow, all motion of the trunk and limbs producing great suffering. In a few cases an eruption of dark or red patches. Some die in a few hours, or, if reaction comes on, linger in a half unconscious state, in great suffering, for several days, till death ensues. Those attacked seem to have been "chiefly children, and mostly young persons." What proportion of cases have proved fatal I have not definitely learned, but it seems to have been unusually fatal.

My employment keeping me from home from Monday morning to Saturday evening, I returned on the evening of Feb. 27th and found my little grand-daughter, aged 4½ years, and, perhaps of sanguineo-nervous temperament, apparently in usual health, with the exception of slight gastric disturbance. I did not deem it of sufficient consequence to require medication, and she was put in bed at an early hour. In the course of the evening she was somewhat restless, tossing herself about in bed, and at length vomited, and the contents of the stomach being sour, I directed an alkaline solution. At 10 o'clock in the morning of the 28th I was called suddenly to the bedroom of the child, as she was thought to be "in a fit." I found her on her side, her head thrown backward, and the spine curved as if to enfold it, with the eyes open, I think with enlarged pupils, the lids in slight continuous tremor, the pulse fluttering, the skin warm, no less on the extremities than on the trunk and face, but not flushed. From this condition she recovered in from five to ten minutes, regaining her consciousness much sooner than the power of speech, the organs of speech seeming to be partially paralyzed. These attacks were repeated once in from three to ten hours, on the 28th, and to March 1st, 5 o'clock, A.M., inclusive, when the paroxysm was very severe. March 1st, at 3 o'clock, P.M., there was a recurrence which was very light, since which, till the present writing, March 1st, 9 o'clock, P.M., there has been none.

As I was in doubt as to the *pathology* of the case, never having before witnessed the *combination* of such symptoms, I called in my friends, Drs. B. and W., for advice. We were familiar with *cephalic* meningitis, but this case certainly wore a different aspect from anything of the sort we had seen. Her first and almost only complaint was of the stomach and bowels, but this was not persistent, and there was neither hardness, enlargement nor tenderness on pressure; and with the exception of the *first* twenty-four hours from the attack, there was no pain produced by moving or handling any portion of the body. The pulse, during the paroxysm, was a mere flutter, in the intervals frequent, but otherwise normal. The tongue was neither dry nor red, but covered with light-brown fur. Occasional flushings of the face, with some dryness and heat of the skin, though generally its condition was apparently normal. During the first night she complained of pain in the *feet*—none, I think, in the head. Her principal complaint, in her own words, was of "stomach-ache," I think having reference to both stomach and bowels. Once or twice she answered my *inquiries* in relation to the head by saying her "head ached," though I have no evidence that she had much of it. Through the day, March 2d, she was very restless, though no very obvious cause for it could be discovered. On the 3d, very quiet and comfortable through the forenoon and previous night, but in the afternoon restless, with pain in the bowels.

Being in much doubt as to the true pathology of the case, I was very chary of remedies. The disease had been supposed by some to be purely *sthenic,* or inflammatory, involving the envelopes of the brain and spinal cord; while others had represented it as *congestive (?),* involving especially the sinuses of the brain, the various trunks of the spinal cord, and tending rapidly to disorganization of tissues. The aspect of the case seemed to me to lack the indications of decided inflammation, and was equally unpromising for stimulating or tonic remedies. On the 28th, at 1, P.M., I ordered five grains of calomel, which moved the bowels two or three times in the following twenty-four hours, the discharges exhibiting nothing peculiar till the evening of the 29th, when pain in the bowels ensued, with slight liquid discharges, containing shreds of mucus. I ordered four grains of Dover's powder, after which she passed a comfortable night. This—the Dover's powder—was repeated at evening, March 1st. March 2d. there having been no fæculent discharge since early on Feb. 29th, I ordered four grains of calomel, combined with four grains of Dover's powder, after which she passed a comfortable night. In the afternoon of the 3d, had a *natural* alvine discharge. This constitutes all the medicine administered so far, with the exception of small doses, occasionally, of sweet spirits of nitre. Mustard poultice to nape of neck, friction of spine with saturated tincture of camphor in alcohol, with very little and light nourishment, such as oyster-broth, cream and sugar, diluted with weak tea, and clear water for drink, constitutes the management of the case to this evening, March 3d.

The query has often arisen in my own mind, is it possible that *worms*, or any other form of gastric or intestinal irritation, can have induced the above very imperfectly-described symptoms?

I should have said before that the urinary discharges have been mainly normal—perhaps slightly high colored.

March 5th.—The case has gone on favorably since last date, with no recurrence of unpleasant symptoms, though she has lost flesh, and looks like one just recovered from protracted fever.

I should have mentioned that slight epistaxis occurred several times, the blood appearing florid, and of normal character.

Is it a "blood-disease," and if so, what is its definite character? "Blood-poison" is a term which I hear, or see, occasionally, but I have only vague ideas of its exact import.

March 5th, 1864. J. L. CHANDLER.

P. S.—March 17th.—I was *too fast* in sending you the account of my grand-daughter's case. Before I sent it I read it to a medical friend, Dr. Knox, who told me, notwithstanding the flattering appearances at the time, I had *not yet* done with it. His prediction has been verified. No well-marked spasmodic paroxysms have occurred, yet the child has failed in appetite, has been very languid, with sunken eyes and countenance; skin pale and of unhealthy hue, though of normal temperature; bowels torpid; pulse *small,* but not accelerated. Prof. Thayer, of Burlington, informs me that he has seen many cases such as I describe, but "don't desire to see any more." He thinks the symptoms denote that the medulla oblongata is the main seat of the lesion, and he calls it *congestion, I* think, of the meninges. Although my little patient had fallen back unexpectedly, since

I wrote you, I hope she is now very slowly improving. Yet I am doing very little for her. Continued counter-irritants to nape of neck, and between scapulæ; at prolonged intervals, a grain of calomel, with pulv. Dov.; a boiled egg occasionally, with a little toast; compound tinct. cinchona, in light doses—comprise pretty much all I am doing. Very respectfully, J. L. C.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, APRIL 7, 1864.

The recent decease of Dr. J. B. Flint, late Professor of Surgery in the Medical School at Louisville, Ky., has called forth the most hearty expressions of respect from the members of the medical profession in that city. At a meeting held on the 21st ult., the chairman, Prof. Lewis Rogers, spoke in the most feeling manner of the rare qualities of the deceased as a physician and friend, and offered the following resolutions:—

Be it resolved, That we are keenly alive to the extent of the bereavement caused by the death of Prof. J. B. Flint, our associate in the arduous duties of the practice of medicine.

Resolved, That in the death of Prof. Flint we have lost an able counsellor, a skilful surgeon, a physician of rare endowments, and one of the kindest and most faithful of friends.

Resolved, That ——— ——— be requested to prepare a biographical sketch of Prof. Flint, and deliver it as an address to the medical profession of the city and to the public who, for nearly twenty-seven years, have enjoyed the benefit of his professional ministrations.

Resolved, That we attend the funeral services of our late associate in practice.

Resolved, That a copy of these proceedings be presented to the family of Prof. Flint.

Resolved, That these proceedings be published in the city papers.

It was moved by Dr. Bell that the blank in the third resolution be filled with the name of Prof. Lewis Rogers; but he declined on account of his health, and the meeting appointed Prof. T. S. Bell to perform the duty.

WM. BAILEY, M.D., *Secretary.* LEWIS ROGERS, M.D., *Chairman.*

From the *Daily Advertiser,* of this city, we take the following biographical sketch of Dr. Flint:—

"A telegraphic despatch from Louisville, Ky., announces the death in that city of Dr. Joshua Barker Flint, a gentleman formerly a resident of this city, where he was extensively known. He died suddenly, of apoplexy, on Saturday, the 19th inst., at the age of 62 years.

"Dr. Flint was the son of Rev. Jacob and Sylvia (Barker) Flint, and was born in Cohasset, Mass., 13th of October, 1801. His father was born in Reading, Mass., 7th of August, 1768, graduated at Harvard College in 1794; was ordained at Cohasset 10th January, 1798, and died 11th of October, 1835, aged 67 years. His mother was a native of Pembroke, Mass. Dr. Flint pursued his preparatory studies under his father's instruction, and graduated at Harvard College in 1820. Soon after graduating he was chosen Usher in the "English Classical School" in Boston, now known as the English High School, of which George Barrell Emerson was the principal, and continuing to instruct there during the first two years of the institution. At the end of that time he began the study of medicine under the instruction of Dr. John Collins Warren, of Boston; received the degree of M.D. in 1825, and immediately began the practice of his profession in Boston, in which he was very successful, until the year 1837, when he received an unsolicited invitation to the chair of Surgery in the Louisville Medical Institute, a new medical school then just organized in in that place. He continued in that professorship three years, when the school was fairly established with a catalogue of over two hundred students. At that time, on account of some Faculty difficulties, he resigned his professorship and devoted himself exclusively to practice. In the mean time he had spent the greater part of the year 1838 in a visit to the medical establishments of Europe. His position as a teacher gave him an early and effective start as a practitioner, and for several years he enjoyed the confidence of his fellow citizens and of a large portion of the western country. In 1849 a new medical school was established in Louisville, called the "Kentucky School of Medicine," under the auspices of the Masonic University of Kentucky. Dr. Flint received the appointment of Professor of the Principles and Practice of Surgery in that institution, and remained in that position as a teacher until his death.

Dr. Flint, while a resident of Boston, was several times elected a representative to the State Legislature, and was a member of the Common Council from Ward 4, in 1831 and 1832. At that time he was an active member of the whig party; but during the Presidency of Van Buren he joined the democratic party and afterwards acted with them. In a letter dated Louisville, April 2, 1852, he says:—'In politics I am a democrat, in religion a Unitarian, in medicine an anti-heroic.' Since the breaking out of the rebellion he has been an uncompromising Union man.

"He married, in April, 1841, Nannie W. Trimble, the youngest daughter of the late Robert Trimble, one of the Justices of the Supreme Court of the United States. Judge Trimble and his family were all citizens of Kentucky. Dr. Flint's wife survives him; they had no children."

THE LATE DR. BENJ. CUTTER.—At a meeting of the Middlesex East District Medical Society, at the house of Dr. W. Ingalls, in Winchester, Drs. A. Chapin, W. Stevens and J. D. Mansfield having been previously appointed, presented the following resolutions, which were unanimously adopted:—

Resolved, That by the death of Dr. Benj. Cutter, late of Woburn, this Society feels impelled, in a special manner, to bear testimony to the great loss which has been sustained. A large community have been deprived of an experienced, able and conscientious physician, a friend long and thoroughly proved, and a citizen of eminent usefulness—ever seeking earnestly the best good of the public, and exerting through his whole life an exemplary and hallowed influence.

Resolved, That to his agency more than to any other, we recognize our indebtedness for the origin of the Middlesex East District Medical Society, and to his wise and persistent efforts its shape, permanence and prosperity. In our personal intercourse we have ever found him eminently courteous, kind and conciliating, and we have all had abundant evidence to judge him both skilful and able, and to accord to him a high position in our profession. Ever quiet and unobtrusive in his ways, his influence has been the greater.

Resolved, That while we deeply mourn own loss, we tender our heartfelt sympathy to the bereaved family and relatives, to the community at large and to our profession.

Resolved, That a copy of the foregoing be transmitted to the family of the deceased, also to the newspapers in Woburn and to the Boston Medical and Surgical Journal for publication, and that they be transcribed in the Records of our Society.

DR. C. W. DAVIS, late Surgeon of the 34th Iowa Reg't, recommends to Army Surgeons, in the *American Medical Times,* the following prescription for all forms of diarrhœa, to be taken in doses of 30 or 40 drops four times a day :—℞. Spts. nit. dulc., ℥ij. ; tinct. opii, ℥i. ; strychnine, gr. i. Mix.

Dr. JOSEPH PANCOAST has resigned his post as Surgeon to the Pennsylvania Hospital, and Dr. Thomas George Morton has been appointed to fill the place.

DR. NORTON FOLSOM, of Cambridge, has been appointed Surgeon of the 45th U. S. Colored troops, stationed at Clarksburg, Va.

WE have received a second communication from Dr. Daniels, on the subject of Poisoning by Opium, which we are compelled to defer publishing for want of room.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, APRIL 2d, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	58	49	107
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.5	39.1	80.6
Average corrected to increased population - - - -	00	00	88.65
Death of persons above 90 - - - - - - - -	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
9	10	4	9	3	0	2	3

COMMUNICATIONS RECEIVED.—An Essay read before the Medical Society of the Surgeons of the 2d Division, 3d Corps, Army of the Potomac, with discussion following.—Tincture of Aconite in Variola.—Case of Traumatic Tetanus.—On the Application of Heat and Cold, as Remedies, to the Sympathetic Nervous System.

PAMPHLETS RECEIVED.—Seventh Annual Report of the Board of Directors for Public Institutions of the City of Boston for the year 1863.—The Rhode Island Tenth Registration Report, 1862.

DIED,—In this city, 30th ult., Dr. William Dolby, 34.—30th ult., Dr. Marcus A. Moore, of Waltham, 39 years 5 months.—In Philadelphia, Dr. John Redman Coxe, formerly Professor of Chemistry in Pennsylvania University, aged 92.

DEATHS IN BOSTON for the week ending Saturday noon, April 2d, 107. Males, 58—Females, 49.—Abscess of the lungs, 1—accident, 1—apoplexy, 5—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 1—consumption, 9—convulsions, 5—croup, 10—diabetes, 1—diphtheria, 3—dropsy, 3—dropsy of the brain, 5—erysipelas, 1—bilious fever, 1—scarlet fever, 4—typhoid fever, 2—gastritis, 1—disease of the heart, 5—malformation of the heart, 1—disease of the hip, 1—infantile disease, 4—intemperance, 3—disease of the kidneys, 1—disease of the liver, 2—congestion of the lungs, 5—disease of the lungs, 1—inflammation of the lungs, 9—measles, 2—pleurisy, 1—premature birth, 2—smallpox, 3—teething, 2—tumor, 1—unknown, 6.

Under 5 years of age, 40—between 5 and 20 years, 15—between 20 and 40 years, 19—between 40 and 60 years, 20—above 60 years, 13. Born in the United States, 76—Ireland, 20—other places, 11.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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RECTO-VAGINAL FISTULA SUCCESSFULLY OPERATED UPON.

BY CHARLES M. CARLETON, M.D., NORWICH, CONN.

[Reported to the Boston Society for Medical Improvement, March 14th, 1864, and communicated for the Boston Medical and Surgical Journal.]

MRS. Y., a respectable Irish woman, aged 24, called upon me for the cure of a recto-vaginal fistula, July 21st, 1862. She was always healthy until seven months ago, at which time she was confined. The village physician in attendance, attempting to deliver by craniotomy, passed a pair of Smellie's scissors through the recto-vaginal septum, and opened them. The child was afterwards stillborn, with the head entire, excepting a laceration of the scalp. The woman was sick for a long time, but finally recovered sufficiently to return to her work in a cotton mill; being, however, obliged to wear a square ever after the accident, to protect her clothes from the alvine discharges, which passed involuntarily *per vaginam*—rendering her life perfectly miserable.

Upon making an examination with the speculum, I found a fistulous opening between the vagina and rectum, beginning at a point about half an inch to the right of the median line of the posterior *cul de sac* of the vagina and less than three lines from the cervix uteri; and extending obliquely downwards to a point one and three fourths inches from the former, and a little to the left of the median line of the posterior wall of the vagina. It had the appearance of an old incision, gaping open to the extent of four or five lines in the middle.

I made an appointment to operate upon her at her boarding house, eight miles from my office, at noon on the 25th of the month; and, preparatory to the operation, ordered her to take an ounce of castor oil on the morning of the 24th; an enema of soap-suds the following night; and another on the morning of the 25th. The diet to consist of beef-juice on the 24th, and no food to be taken on the 25th.

On the 25th, I performed the operation, assisted by Drs. Farnsworth and Kinney, of Norwich, and Mr. Ripley, my student. The patient having been etherized, and placed in the position for lithotomy, before a strong light, the fistula was exposed by means of Sims's speculum, held by an assistant standing on the left of the patient, and two bent copper spatulæ, with which the same assistant, and another on the right, made traction upon either side of the vagina, as occasion required. I then seized the fistulous edge of the opening on one side, with a long pair of bull-dog forceps, and with a spear-pointed knife denuded the edge from that point to the inferior angle of the fistula. I then did the same on the other side. Then substituting a pair of curved scissors for the knife, and retaining my hold with the forceps, I finished the paring of the edges by a single cut on either side; the two superior incisions meeting at the cervix uteri. The bleeding was stopped with ice-water, applied by means of sponge probangs prepared for the purpose. The next step in the operation consisted in bringing the denuded edges together, by means of silver sutures. For this purpose I made use of half-curved needles, three fourths of an inch long, loaded with double silk, the silver wire being looped into the loop of the silk. The index finger of the left hand being introduced into the rectum, the needle, by means of long forceps, was passed through both vaginal and rectal tissues, one third of an inch from the cut edge, from within out on one side, then from without in on the other. The wire was then drawn through both sides at the same time. To guard against its cutting the tissues, Bozeman's forked director was used. Eight sutures were introduced in this way, beginning at the top of the wound, the ends of each being slightly twisted as soon as introduced.

The edges of the wound were then brought close together, and the sutures twisted, by means of Sims's adjuster and long forceps. The twisted ends were turned down, towards the vulva, and left about half an inch long. The ether was now discontinued. Vomiting ensued, but did no harm. A sigmoid catheter, armed with a stopper, was introduced and left in the urethra, and the urine drawn off at stated intervals, to prevent the possibility of its coming in contact with the wound.

I ordered one third of a grain of morphine to be given every six hours. Diet of beef-juice in moderate amount. The vagina to be syringed out gently with lukewarm water twice daily.

July 26th.—Patient complains of some headache, and stiffness about vagina; no great soreness; no appetite; pulse 90. Diminished morphine to one fourth of a grain every six hours.

July 29th.—Had slight watery discharge from bowels; nothing passed by the vagina; is comfortable every way, but alarmed about the dejection. Increased morphine to one third of a grain every six hours.

Aug. 1st.—Had a second dejection.

Aug. 2d, eight days after the operation, upon examination with the speculum, I found the wound healed throughout its entire extent; removed the sutures. Continued morphine, one fourth of a grain every six hours, for three days longer. From this time the woman did perfectly well; and in three weeks after the operation returned to her work, cured.

Aug. 28th, thirty-three days after the operation, I made a speculum examination. The parts were perfectly sound. There was not the slightest communication between the vagina and rectum; nor was there any serious degree of contraction.

A few days after this I went South, having been appointed Surgeon to a Connecticut regiment, and heard nothing more of my patient until November, 1863, when I was told by the woman who took care of her at the time of the operation, that she saw her the month before, and that there had been no return of the trouble for which I treated her; although she had had sexual intercourse with her husband as usual, excepting the first month after the operation, until his death, a period of eight months. She never became pregnant again.

AFTER-TREATMENT OF AMPUTATIONS AND RESECTIONS IN THE THIRD CORPS FIELD HOSPITAL AFTER GETTYSBURG.

By C. C. Jewett, Surg-in-Chief, 1st Brig., 2d Div., 3d Corps.

[Read before the Medical Society of Surgeons of the 2d Div., 3d Corps, Army of the Potomac, and communicated for the Boston Medical and Surgical Journal.]

At my request our worthy Vice President has given me a subject on which to write, and has selected "The After-treatment of Amputations and Resections in the Field Hospital, as witnessed in the 3d Corps Hospital after Gettysburg"; and it is in fulfilment of my promise to write on the subject assigned, that I propose now to give you a few hastily arranged thoughts.

Soon after returning from the field hospital of the 2d Division, 3d Corps, in Gettysburg, while in the possession of data furnished by the records of the hospital and with the interest excited by the recent occurrences and a fresh recollection of them, I made a careful report of what there came under my observation to the Surgeon-General of Massachusetts, which communication, although published, I have not at present by me. In this report were given the number of the various kinds of amputations, with the percentage of primary and secondary, and deaths resulting in each; the number of resections, of compound comminuted fractures of the femur, of the complications secondary hæmorrhage and tetanus, with the noticeable features, as well as the usual plan of treatment followed in each, and the hints gathered therefrom. However easy and pleasant may have been the writing of such a paper at the time, it is not accomplished with facility now in the absence of documents and with the interim of time which has since elapsed, occupied with other subjects; and with the present moment bringing all the interruptions cumulating on the first of the month in the shape of orders, letters, reports, &c.

In hospitals composed, as were those at Gettysburg, there can be no strictly uniform plan of treatment. System requires time for its maturing, and a dozen surgeons brought together from as many different schools, and each having zealous interest in the cases belonging to his own regiment or that he has individually operated upon, will hardly work at once in a groove, so as to make it possible to say such and such is the plan pursued in this hospital. If I except, however, two medical officers—(both of whom, I believe, no longer belong to this Division)—one of whom was very fond of immediately clapping a poultice on every stump, and the other of treating compound comminuted fractures of the femur by crossing the legs, defending the practice on the ground that it was the *easiest* position for the patient—there was no great discrepancy apparent in the systems of treatment pursued by the surgeons in attendance. Although we could show in our hospital some beautiful results of union by first intention after amputation, yet a large proportion of stumps suppurated very considerably; and as the treatment connected with the process of suppuration is in many respects identical with that pursued after resection, which comes within the letter of my bond, I propose to give my attention mainly to this portion of the subject; passing lightly over the treatment more generally pursued to secure union by adhesive inflammation.

Adhesion was interfered with in some instances by the too great number of sutures used; in others by the injudicious wad of bandages applied; while in others still the flap, having united superficially, after a few days gaped open from the pus burrowing beneath and forcing apart the united surfaces. There was one style of operation, the bilateral, which had this condition of things as a usual result; and it seems a sufficient objection to the flaps thus produced that no position or pressure can be suitably applied in the field, to insure union of the deeper portion of the wound.

The dressings used were generally as light as possible; cloth having the preference of most of the Surgeons in charge of wards, as well as my own, over lint. A very neat dressing, fulfilling every indication, was a piece of linen cut in the form of a Maltese cross, and lightly confined to the stump by a single turn of the bandage. In no one instance of a patient in the hospital of the 2d Division, 3d Corps, at Gettysburg, was it thought prudent to treat *according to rule* in respect to diminishing the diet. It had already been quite sufficiently antiphlogistic before the operation to preclude any danger of inflammation from over-nutrition; and the bill of fare at this time was not of that surfeiting richness to render the exclusion of many articles necessary. To the best of my knowledge, every man operated on had diluted whiskey soon after coming out from under the influence of chloroform, and received from the first as liberal an allowance of beef-tea as could be obtained. I saw no unfavorable results from this course of procedure. The plan pursued was, during the days prior to the full establishment of the suppurating stage, to moderate the inflammation and consequent suppuration by cold applications assiduously attended to, this treatment also giving the most favorable condition for securing a union by adhesion. After resection the same cold-water dressings were used. In no case were pledgets of lint or charpie employed, but an effort was made to have all appliances to the wound light and unirritating. Very constant attention is required to keep the water dressings cold, and when the patient cannot attend to them himself or have a careful attendant, a siphon so arranged as to let cold water constantly drop on the part is highly useful. This plan was pursued by a friend of mine, under whose charge I left a case of Perigoff's section, immediately after the operation, some year and a half since; and the very happy result of the case I ascribe in a great measure to the thorough and constant application in this manner of cold water. During this stage ice is a valuable adjuvant, for the comfort and utility of which our wounded, of the first days of July last, have reason to thank the Sanitary Commission.

After the suppurative process is fully established, the abundant use of cold applications is injurious. The indications now are to moderate suppuration, to allow free exit for the discharges, to promote cleanliness, and, if necessary, to use astringent or disinfecting fluids. At this time, the proper use of the cold-water dressing is to moisten the cloth at longer intervals, simply to prevent its agglutination to the wound, and to remove it entirely two or three times a day for the purpose of cleansing it. I was always in the habit of treating wounds in this stage by a weak dilution of Labarraque's solution of chlorinated soda, or of Burnett's disinfecting fluid. Not only are cleanliness and the comfort of the patient thus promoted, but suppuration is moderated. Disinfectants were almost unknown articles in the time and place we are particularly speaking of, and could not therefore be put to these uses. Dr. Sim, formerly Medical Director of this Corps, during a conversation held with him soon after his return from the care of Gen. Sickles's leg, told me that he treated that, to us famous stump, by medicating the water dressings with permanganate of potash. I have used the tincture of the muriate of iron, for the purpose of moderating suppuration, with good success, but should give my preference in the field to the perchloride of iron, which was extensively used for this indication in the Crimean war, as more convenient. Coal oil, besides accomplishing other useful ends, was thought also, in the Field Hospital at Gettysburg, to be of value in these cases. I can speak with extreme satisfaction of the use of castor oil as a substitute for simple cerate, where granulations are springing up in a healthy manner, having the advantage over the cerate of being thoroughly unirritating and not becoming rancid.

Considering the class of cases we have to treat after a battle, the constitutional treatment after amputation having my preference is muriated tincture of iron three times a day, eggs to the extent of a dozen in the twenty-four hours from almost the very first; and after two or three days a diet as rich in everything nutritious as can be obtained and is relished; and also a fair allowance of stimulus. Of course the greater the degree of suppuration the greater the amount of nutrition required.

Regretting that the time at my disposal and the other circumstances referred to compel me to make so incomplete a paper on this subject, I will leave it here, trusting that the remarks of the members of the Society will fill out and build upon the skeleton merely indicated.

DISCUSSION.

Dr. KING inquired of the essayist, whether, in objecting to the bi-lateral flap operation, as causing great inconvenience, on account of the difficulties of keeping the parts in proper approximation and thereby diminishing the risks of the burrowing of pus, his remarks referred to the arm as well as to the leg?

Dr. JEWETT replied that he considered the same objection to hold good in bi-lateral flap operations of the upper extremities; such, at least, had been his experience.

Dr. CALHOUN remarked that the subject of the treatment and progress of operations, and the wounded generally, while in the field hospital, and before their removal to general hospitals, was very important. Surgeons in the field feel deeply the need of knowing the result of operations. Especially after the battle of Chancellorsville was this fully impressed upon his mind. There was one point, however, which he wished to allude to, in regard to operations and their results, as gathered from statistics of general hospitals. These statistics are too favorable, as they include only the cases which have successfully passed through the field hospitals, while unfavorable cases have terminated in the latter. To obtain reliable data as to the favorable or unfavorable results of any operation, it would be necessary to include all cases, those in field as well as in general hospitals.

Another interesting point to which his attention was called by the essay, was, the preference, at present shown by surgeons, of the flap operation to the circular. Why is this? Is there any difference in the secondary results? He could not explain the fact, except, perhaps, that the flap operation generally made a better stump. In the earlier operations of the war, gentlemen could well remember that the circular method was universally employed. In the first battle he did not remember having seen flap operations performed by more than two surgeons. All this has changed.

He fully agreed with Dr. Jewett's remarks as to the bad effects of bandages, often interfering materially with the comfort of the patient and the proper condition of the wounds. So seriously had the bad effects of too much bandaging been shown, that once, as the members would remember, he issued a circular forbidding their use entirely, and he thought the order did a great deal of good. It was Guthrie, who, if he remembered rightly, once said that people would do better if they would send him boxes of candles instead of boxes full of rollers. It is difficult to prevent swelling and undue pressure, even if the bandages are properly applied at first. Especially on the field should the temporary bandages, applied at first, be light.

Dr. JEWETT remarked that a farther objection to the extensive use of bandages was, that they interfered with cool dressings, so essential in securing healing by first intention.

Dr. IRWIN stated that he had noticed frequently that rollers are made of new cloth, which, as soon as moistened, shrinks and compresses the parts. He had frequently seen cases in which, the bandages having been applied on the field, and some time elapsing before the dressings were renewed, the limbs became unduly swollen and inflamed. Rollers should always be sponged before being applied, so as to avoid shrinking.

Dr. CALHOUN agreed with Dr. Irwin. He believed, however, that the rollers and bandages, now supplied from the laboratory at Philadelphia, are all previously sponged, so as to prevent subsequent shrinking. He would ask Dr. Jewett, whether there had been many cases of secondary hæmorrhage in his experience at Gettysburg?

Dr. JEWETT could not give the exact number; but there were comparatively few cases. Altogether, not more than about a dozen.

Dr. IRWIN remarked that he had never been much afraid of secondary hæmorrhage in private practice, but in the field he dreaded it seriously. He thought that the tendency to secondary hæmorrhage was due to the generally poor condition of the patient's system. In consequence of the excitement, fatigues and marches, previous to being wounded, men are not nourished up to the proper standard. All the cases of secondary hæmorrhage which he had seen in the field, occurred in men who had been poor conditioned or had previously been run down by sickness. In his experience of secondary hæmorrhage, it had generally taken place from the enlargement of smaller arteries; not a sloughing through, or bursting of large arteries and *per saltum* hæmorrhage, but an oozing of fluid, filling the cavity of the wound with blood, and, if not arrested, exhausting the patient. At Chancellorsville he saw a man die, it was said of secondary hæmorrhage. But the whole amount of blood lost did not amount to more than a teacupfull; and he thought that in a number of instances the secondary hæmorrhage accompanying a fatal case was incidental, and not necessarily the cause of death.

Dr. IRWIN referred to the use of coal oil as an application to wounds, which, he understood, had been employed to a great extent at Gettysburg. He would like to hear members, who were there, state their experience in regard to it.

Dr. Whiston stated that such had been the case. He considered coal oil as a very good disinfectant and deodorizer. In cleanses the wound well, and keeps away flies and vermin; it causes no disagreeable sensation to the patient. In regard to sutures, he had seen at Gettysburg two cases of amputation of the thigh, in which the silver suture was used, unite by first intention.

Dr. Calhoun greatly preferred the silver suture; it saves time, being readily applied, and is more easily removed. In a recent operation for phymosis, he had, by means of the silver suture, obtained union by first intention throughout.

Dr. King referred to irrigation of wounded parts by means of a siphon, as requiring constant attention and supervision; it is a most powerful method of applying cold, and unless great care is exercised the vitality of the parts may be lowered to an injurious extent, and the death of the flap may follow. He had seen one instance in which injury had been caused in this way.

Dr. Calhoun, in calling attention to the importance of keeping the cavities of wounds well cleaned, cited a paper lately published by Dr. J. B. Smith, on resections and amputations, in which Dr. Smith states the good results of introducing a small catheter into the cavity of the wound, to drain it of the offensive pus. In resections of the shoulder, this is of special importance.

Dr. Hough related a case of amputation of both legs in a young man, in which both stumps healed by first intention.

At a meeting of the Medical Society of the Surgeons of the 2d Division, 3d Corps, Army of the Potomac, held March 2d, it was voted, "that the essay read by Dr. Jewett, with a report of the discussion following, be forwarded by him to some medical journal for publication."

DEATH FOLLOWING THE EXCISION OF A NÆVUS.

By Samuel Cabot, M.D., Surgeon to Mass. Gen. Hospital.

[Read before the Boston Society for Medical Improvement, March 14th, 1864, and communicated for the Boston Medical and Surgical Journal.]

March 8th.—A child 7 months and a few days old was brought to my office for advice, in reference to a vascular tumor (raspberry), situated on the right side of the os frontis, at some distance in front of the coronal suture. As it was increasing rapidly in size, I advised that it should be removed at once, and as it was situated over a smooth bony surface, favorable for the easy arrest of bleeding, I decided to excise, rather than to apply ligature. Assisted by my neighbor, Dr. J. C. White, who kindly attended to the etherization, I cut out the tumor by two semilunar incisions, extending through the scalp. There was but little bleeding, about an ounce—certainly not two ounces of blood were lost; two small vessels were tied, and the sides of the wound were brought together by interrupted silk sutures. A compress and bandage were applied, and the operation terminated. It took but a short time, and Dr. White says that not more than an ounce of ether was used.

I was obliged to leave my house as soon as the operation was finished, and did not return till after the patient had gone. I told the father of the child to call in a physician and have the stitches removed on the second day.

I should have thought no more about the case, as nothing about it gave any ground for anxiety, if I had not received, on the 14th, a letter from Dr. A. LeB. Monroe, dated 11th, saying, " The child from whose head you removed an erectile tumor last Tuesday, died the next day. I was called the next morning. Pulse very weak and frequent, skin cool, pupils dilated, conjunctivæ injected. At 3, P.M., pulse imperceptible, pupils more dilated, and unaffected by a strong light, respiration slow and difficult; died an hour or so after.

" This morning made a *post-mortem* examination. Upon reflecting the scalp, the intervening cellular tissue was found infiltrated with blood, from an inch or more forward of the wound, back over the occiput to the nape of the neck. The track of blood varied from one to two inches in width. Upon removing the calvarium, the vessels of the brain were seen unusually distended, and the brain itself rather softer than we usually find it without disease. The mother says the child never recovered perfect consciousness; it nursed once on the way home, and once afterwards. About 12, P.M., it vomited, and after until 2, A.M." Dr. M. in a subsequent letter says, " The ligatures you applied remained firm, and I found no artery unligated." Dr. M. told me afterward that there had been no escape of blood externally, the dressings were unstained.

On reviewing this case, we find a healthy child, after an operation involving a small surface of the head (the wound when closed not being more than an inch in length), accompanied by very moderate loss of blood and small degree of etherization, remains in a state of partial unconsciousness for twelve hours, then it is seized with vomiting, which lasts for two hours, followed by collapse and death in twelve hours more—the whole time from the operation to the death being about twenty-six hours.

TINCTURE OF ACONITE IN VARIOLA.

By Joseph W. Clift, Act. Assist. Surg. U.S.A., Artillery Brig., 6th Corps.

[Communicated for the Boston Medical and Surgical Journal.]

In common with many other portions of this Army, this command has been visited the past season with smallpox. Jan. 10th, 1864, about fifty "contrabands" were sent here for mule drivers; they came from a camp near Washington, where the disease prevailed.

Jan. 16th.—W. L., white; occupation, wagon-master; was brought to the hospital. Patient was a robust, healthy-looking man, about 28 years of age; the following symptoms presented themselves:—Skin dry and hot; cheeks flushed; pulse 120, full and hard; tongue heavily coated with a light brown coat; respiration 16 a minute, long drawn and apparently painful; delirious at times, with lucid intervals; very restless, complaining of great pain in the lumbar region. He was reported as having been sick two days. The steward saw him first, and reported it to me as a case of typhus fever. Saw him a few minutes after, when the above symptoms presented themselves, and on uncovering the abdomen eight or ten rose-colored spots were scattered about; they disappeared for a moment on pressure, feeling to the touch like a small shot under the skin. I also learned, on inquiry, that he vomited that morning, and had passed several liquid stools during the day. There was no sign of any eruption on the face or other parts of the body, and the only thing, I believe, that caused me to suspect the true nature of the disease, was the violent and persistent pains in the back. He was removed to an empty tent, and ordered, ℞. Ol. ricini, ℥ i., tinct. opii, gtt. x., at bedtime, with spts. æther. nit., ʒ ss. every two hours during the evening. The next morning the patient reported better. Pulse 110; delirium subsided; skin a little less dry; had passed fæces and urine; pain in back less, and a scarlet eruption appeared over the entire trunk, but *nowhere else.*

During the next three days the patient complained little, and the eruption appeared and followed the usual course, until a case of confluent smallpox of the most malignant character was fully developed, the most singular thing noticed being that the face was the last to show any sign of the eruption—the first appearance of it being noted on the fourth day after admission, and the seventh of the disease.

Secondary fever, accompanied with delirium, set in the day following (eighth), and during the following night he succeeded in escaping from the attendants, and ran out of the tent on the frozen ground, barefooted. Some ten minutes elapsed before he was captured and returned to his bed. Next morning the eruption had disappeared; twenty-four hours after, death took place. Treatment throughout aimed at procuring quiet by opiates, keeping the tent at a uniform temperature, and a daily evacuation of the bowels and the discharge of the normal quantity of urine, leaving the rest to nature. The case did well enough till the patient escaped, and served to impress several things on my mind.

1st. Tents do not form a suitable hospital for this class of patients. He rushed out through the back of the tent, tearing up the tent-pins; a building could easily be made secure; the result is, we have a log hut now for such cases.

2d. The eruption does *not always* appear on the face *first*, but *sometimes* covers every other portion of the skin before it appears there.

3d. I believed the delirium might have been lessened, could a drug be found acting particularly on the extremities of the cutaneous nerves, in such a manner as to lessen their sensibility, and prevent the transmission of impressions to the brain; and determined, if I had another case, to administer aconite for this purpose.

Feb. 7th.—J. was admitted into the hospital. Patient a mulatto; 20 years of age; healthy and robust. Presented the same symptoms as the previous case, except that the eruption appeared on the face *first*. Fever and delirium ran equally high. In addition to the usual simple treatment—appealing gently to all the excretions—the strong tr. aconite was administered, gtts. ij. to gtts. iv. every two hours, diluted with water. Beginning with two drops, the dose was gradually increased, its effects being carefully watched, until its sedative effect was noted in the circulation, tickling of the fauces, and heaviness of the head, and the peculiar effect desired on the cutaneous nerves was produced. The patient was kept in this state nearly all the time, until after the secondary fever had reached its height, the only guide followed being the physiological effects of the drug on the system. Three or four drops every three hours were generally sufficient, but at one time the dose was increased to six drops, before my object was attained. Omitting it a few hours at one time, it was found, that as elimination of the drug from the system progressed, general uneasiness increased, the pulse became more frequent, delirium troublesome, while the patient manifested the usual disposition to tear the skin with his nails. Continuing the medicine, these symptoms subsided. As the pustules matured, and dried, the necessity for the drug gradually ceased, and it was as gradually discontinued.

To prevent pitting, the pustules were opened, and the contents absorbed by soft rags, dipped in tepid water, the face being continually covered with a soft cloth, frequently dipped in warm water. Patient was discharged in five weeks, with no marks on his face.

I have since tried aconite in two milder cases of the disease, with similar results, and intend to give it a further trial should measles or scarlatina visit us. It should never be prescribed, in my opinion, unless the physician is near the patient, or can rely on intelligent nurses.

It is hoped that this drug may fulfil the indications required in the class of diseases referred to. It is worth a careful trial; my limited experience enables me to say no more. Should further trial confirm present impressions, you shall be informed of it.

March, 1864.

LETTER FROM PHILADELPHIA.

[Communicated for the Boston Medical and Surgical Journal.]

PHILADELPHIA, APRIL 6th, 1864.

MESSRS. EDITORS,—Last evening, by invitation of some of the members, I attended, with a physician from Tennessee, the monthly meeting of the "College of Physicians." This is, I think, the oldest, or *one* of the oldest medical institutions of the country, having been founded in 1789. Dr. George B. Wood, one of the authors of the Dispensatory and of many other valuable works, the President, was in the chair. The meeting was held in their new edifice, corner of 13th and Locust Streets—a new, fire-proof building erected to hold the museum donated to the College by the late Dr. Mütter, of this city. Dr. M. gave to the College his museum and $30,000 to keep it in order, to replenish it, and to support a lecturer, provided they would erect a secure building to contain this museum. We were kindly shown the specimens by Dr. Paul, Treasurer of the College. Some of them are very rare and well worth preserving.

The subject of discussion before the College was "Spotted Fever," which prevails here to a considerable extent. It was opened by Dr. JOHN BELL, author of "Bell on Baths," and of several other medical works, by reading and commenting upon Broussais's account of a somewhat similar disease, many years ago.

Dr. LEVIZIE read a paper upon the same disease, with several *post mortems* of cases which he had seen. He said some called it *meningitis*, others *spinal meningitis*, &c., but he would use the name of *spotted fever* for want of a better.

Dr. DARRACH said he had three remedies, which comprised his treatment of this disease; namely, venesection, brandy, and quinine. He stated a case, the son of a physician, 16 years of age, where the patient revived after he was considered moribund, by being bled. There was great venous congestion.

Dr. CONDIE, author of a work on the Diseases of Children, said he should as soon think of cutting off the patient's head as of bleeding in the cases which he had seen. He did not find venous congestion in any case, and he believed Dr. Darrach's case was an exception, and consequently that his treatment would do no good.

Dr. Darrach replied with some energy, maintaining his former ground. Dr. Condie said he spoke only of those cases that he had seen. Dr. Bell had no doubt that there had been cases in which bleeding had been serviceable.

All seemed agreed on one point, viz., that this is *a malignant disease of the blood,* and very difficult to account for. The general treatment here seems to be the *stimulating* or *sustaining* plan—quinine, brandy, &c. Several physicians have died of it within a year, and in some families as many as three children. The patients seem to be perfectly prostrated from the beginning of the attack. It seems to the writer that the disease is but the old *camp malignant typhus fever,* and that it may be somewhat modified by atmospheric conditions.

Will some of your Massachusetts physicians, through your JOURNAL, give us their views of it, and inform us if they have had any cases in practice, and, if so, what has been their treatment?

Yours, &c. W. M. CORNELL.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, APRIL 14, 1864.

ANNUAL REPORT OF THE TRUSTEES OF THE MASSACHUSETTS GENERAL HOSPITAL.—To the medical profession of New England the annual report of this institution always comes with fresh interest. Although when compared with most other public hospitals, especially with our gigantic military hospitals, it sinks almost into insignificance in point of size, yet the fact of its being the principal General Hospital of New England, and its close association with the largest Medical College of this section of the country—most of its professors being on its list of officers—has had the effect of bringing into its walls an unusually large proportion of interesting and important cases. This is specially true of the surgical department, in which of late years the number of cases of the most serious character has very rapidly increased. The new City Hospital, to be shortly opened, will meet a want as a charity hospital which has long been felt; and we hear of a project on foot to erect, in the neighboring city of Providence, a hospital which in completeness and liberality of arrangements promises to be among the foremost in the country. At the present time the old Massachusetts General Hospital still furnishes peculiar advantages to medical students, and they are most liberally afforded to them by the Trustees. We have reason to believe that the direct practical benefit thus furnished has been found by students to be much more thoroughly available than that promised by the prospectus of many of our large American schools of medicine, but in which the wide space between them and the hospitals, and the infrequent opportunities of visiting the latter, very seriously interfere with the fulfilment of the promise. From the report before us we learn "that there were admitted to the hospital during the year 1863, a total of sixteen hundred and forty-eight persons, of whom six hundred and forty-eight were Americans, and one thousand foreigners, the whole number treated having been seventeen hundred and ninety-three. The admissions exceed those of any year but 1862, by two hundred and thirty-two, while they exceed that year by thirty-seven; and the constant and rapid increase in the number of patients for the last twenty years, would certainly seem to indicate that the attractions and advantages of the institution are becoming more and more appreciated, and that a certain undefined repugnance to hospital residence and treatment, which is known to have existed among various classes of society, is being, to a great extent, overcome."

In the department of out patients, "the whole number of applicants has been 5214, of whom but 227 were not treated, while 1590 prescriptions were furnished without charge. When it is considered that ten years ago there were but three hundred and fifty-eight out-patients, it will be seen what an important branch of the hospital this dispensary department has become."

From the report of the Superintendent we take the following table of results:—

DISCHARGED DURING THE YEAR.

	Males.	Females.	Total.
Well,	518	338	856
Much relieved,	82	80	162
Relieved,	183	114	297
Not relieved,	61	35	96
Not treated,	32	26	58
Dead,	111	51	162
Insane and eloped,	11	1	12
	998	645	1643

"Proportion of deaths to whole number of results, 10 per cent. Number of patients admitted on account of accidents, 292, and the Sears free beds for accidents were constantly occupied. Many of these were fatally injured, and in a dying condition when received. A very considerable number of incurable medical cases also were received with the expectation merely of affording comfort for a few days, until released by death. The deaths were about equally divided between the medical and surgical cases."

The annual report of the Superintendent of the McLean Asylum forms part of the document before us. The number of inmates Jan. 1st was 201; 90 males and 111 females. Admitted during the year, 94—viz., 51 males and 43 females. Discharged, 69—39 males and 30 females; of which 36—19 males and 17 females—were considered recovered; 6—3 of each sex—were much improved; 9—6 males and 3 females—were improved; 5—2 males and 3 females—were not improved; and 13—9 males and 4 females—died. A large portion of the report is devoted to a consideration of the alleged possibility of the detention in insane asylums of well persons placed there from improper motives. There can be no doubt that such cases, in this country at least, are well nigh impossible, and that the reports of particular instances of such imprisonment which occasionally agitate various circles of society are entirely groundless. Dr. Tyler gives a detailed account of the safeguards which the law has instituted for the personal liberty of those suspected of insanity, and, as he truly says, "it is inconceivable that such detention should exist, except upon the supposition that the officers of such institutions are dishonest men. . . . The only effective way to guard against any abuse from unjust admission and detention in our hospitals for the insane, is not to raise more impediments in the way of their being occupied, by additional forms and processes of admission, unless indeed you are willing to abandon all the curative measures which the study and experience of years has proved to be successful with this terrible malady, and reduce them to mere receptables for incurable disease, but by the most rigid scrutiny and diligent care to make sure that the guardians, officers and attendants of these institutions, are all trustworthy persons and fit to be charged with such high responsibilities."

We always experience a personal feeling of comfort and contentment after the perusal of one of Dr. Tyler's excellent reports, which we are sure is but a reflection of his influence upon all who are placed under his discreet and tender care, and are impressed with the conviction that those unfortunate ones who have bent beneath the harassing cares and passions of the outer world will find in Somerville a calm retreat and peace.

TREATMENT OF POISONING BY OPIUM.—We received the following communication from Dr. Daniels several weeks since, but could not give it space until the present time. The author will excuse, we hope, our omission of some passages not bearing directly upon the scientific and practical questions at issue, while we proceed at once to the points of difference between us. Dr. Daniels says :—

"To my question, 'is this a state in which the prostrating influence of an emetic is desirable, provided the medicine will act as such ?' you say that 'in your opinion it was.'

"An eminent author,* in detailing the ordinary effects of an emetic, says : 'Usually within twenty or thirty minutes after taking an emetic, a general feeling of uneasiness and nausea comes on. The pulse becomes feeble, small and irregular ; the face and lips grow pale ; a distressing sensation of relaxation, faintness, and coldness of the whole system is experienced ; the saliva flows copiously from the mouth ; the eyes lose their lustre ; and the whole countenance appears dejected. These symptoms, which constitute the first stage of vomiting, continue for a variable period, and are followed by the ejection of the contents of the stomach.' Now do you *really* think that the condition of this patient was one to which it was desirable to add the circumstances here enumerated ?

"You ask, 'What harm, then, from the administration of an emetic, powerful enough to overcome the insensibility of the stomach and compel it to reject its fatal load ?' *Possibly* none ; but who will say, in view of the ordinary constitutional effects of an emetic, even in the first stage of its operation, that it is free from danger ? Take a patient, in such a state of prostration and inertia as the one under consideration, and add to it the conditions which give rise to the concatenation of symptoms above stated by Pereira, and it appears to me that you add very materially to the dangers that beset him. But this is not the end of it.

"Pereira goes on to say :—'As soon as actual vomiting commences, the general phenomena are altered; the pulse becomes frequent and full ; the temperature of the body increases, and a sweat breaks out on the face and other parts. During the act of vomiting, in consequence of the pressure made on the abdominal aorta, and the interruption to the circulation through the lungs, from the impeded respiration, the blood returns with difficulty from the head, the face swells and becomes colored, the conjunctiva is turgid and red, the jugular veins are gorged, and tears burst from the eyes. The violent straining is often attended with pain in the head and eyes,' &c.

"And now, do you claim that the condition of our patient's brain is such that we can subject him to all this with impunity? Do you still think the effects of an emetic desirable? Do you still ask 'what harm?'

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* Pereira. Materia Medica and Therapeutics, vol. i., p. 268, Ed. 1852.

"But, again; 'When the vomiting has entirely ceased, the patient feels languid, oppressed, and drowsy, and the pulse becomes weak and slow; and the exhaustion is sometimes so great as to be attended with fatal consequences.' And 'among other occasional ill consequences of vomiting may be mentioned comatose affections,' &c.

"But, 'the result, we are told, after a repetition of what we should not regard as a violent emetic,' was 'tolerably free vomiting, emptying the stomach completely.' You 'do not believe the patient sustained the least injury from this.' I cannot prove that he did, any more than you can that he did not; but it seems to me that I have shown that there were twenty chances for him to be injured where there was one for him to escape injury.

"You 'believe that up to the point of vomiting, any amount of emetics may be given with perfect impunity.'

"Is it not plain that in indulging this idea you overlook, and disregard entirely, all of the influences exerted upon the system by the sedative and sickening effect which emetics exert upon it before emesis begins?

"Would you recommend that in all cases we permit ourselves to glide with such ease and indifference over such considerations as these? You say that 'up to that point' (the point of vomiting) 'the power of the emetic is obviously annulled by the opiate; so that whatever (if any) depressing effect may result, is due to the overplus of the emetic, which, when administered as in the present instance, must have been a very small quantity, and that of so innocent a drug as ipecac.'

"Here, then, you are claiming that the opiate so far annuls the effect of the emetic as to prevent the patient from being nauseated before he vomits, for it is in a large degree upon his nausea that his prostration and depression depend, in the first stage of an emetic's operation.

"As to the innocence of ipecac. as a drug, it is undoubtedly generally innocent as a poison, but not always; and as to the first stage of its effects as an emetic, innocence ought not to be claimed for it. You say that 'certainly very few physicians will believe this' *emetic* 'was of any very serious weight in the present instance.' To this I have only to say, so much the more unfortunate for humanity. You next say that, 'even if there had been an obvious risk in employing the remedy, the case was urgent enough to justify it.' Now I can imagine a case, remote in the country, where no suitable means of evacuating the stomach could be had, in which your remark would be eminently true; but it appears to me that in the city of Boston this claim is scarcely admissible."

With regard to the first query in the above, we freely admit that a literal interpretation of our language makes us declare more than we intended. We think any candid reader, however, will at once see that our meaning was, that we considered the case a proper one for the administration of a suitable emetic, not that its "prostrating influence" was "desirable;" of course we should endeavor to bring about as speedy an operation from it as possible. Dr. Daniels can hardly suppose we should seek to produce such a fearful exhibition of the effects of prolonged nausea as the above graphic picture from Pereira delineates. No intelligent physician would do this, but would repeat the dose at short intervals until the stomach is evacuated, using such emetics as act promptly and leave comparatively little subsequent nausea. Pereira himself recommends emetics in such cases. The case of a patient with a fatal dose of opium in his stomach is a desperate one, and requires very decided treatment. Of the two dangers, that of allowing a destructive quantity of the drug to be absorbed into the general system or the risk of a certain amount of prostration from the nausea of an effective emetic, we cannot hesitate one moment in incurring the latter. Up to the moment when symptoms of nausea appear, we repeat, the emetic is of course inert—neutralized by the opiate. The nauseating and emetic effects result from the power of the surplus; and we should hasten the latter by the usual methods, in order to get rid of the opiate as soon as possible and incidentally to avoid the disagreeable consequences of prolonged nausea.

"Next, the 'forced exercise.' You say, inasmuch as 'it is generally recognized as an approved method, Dr. Blake was certainly authorized in employing it.' Well, he was; and I attach no wrong in anywise whatever to Dr. Blake. He did his best, and did it thoroughly, and in a manner to be approved by the present status of medical estimate of this subject. If I were to set about blaming some individual for this kind of practice in this *kind* of case, I should not need to go from home. God forgive me, I have committed the error too often. But now I insist upon it, that it is erroneous and preposterous, and ought to be abandoned and condemned by the profession. The condition of a patient thus situated is such that it is incumbent upon us to husband and save his strengh, instead of wasting it in this way. Those who live under its influence, live in spite of it; and I am unable to see a solitary one of the sensible indications that is met by it. It certainly promotes respiration no better than a slight, sudden movement of the chest would. There is no evidence that it promotes the elimination of the poison from the system; but it is even doubtful whether it does not suspend or interrupt permanently the movement in the channels of elimination. The idea of awaking and arousing up a patient in such a way, under such circumstances, is ridiculous."

With regard to the method of keeping a patient threatened with fatal narcotism awake by forced exercise, we have nothing to say that we have not already said in our previous article, in No. 6 of the present volume of the JOURNAL. We think that the considerations urged by Dr. Daniels are of much weight. As we stated before, we prefer the use of the magneto-electric battery.

"Instead of having overlooked the doses of belladonna taken by this patient, I left that matter for somebody else to notice. It was such a heroic application of the great dogma of homœopathy that I thought possibly I had better leave it to men of that stripe. I am happy to see that you have done it justice."

We would remark that the use of belladonna in this case was in accordance with recent views of high medical authorities, that these drugs are in many respects antagonistic to each other. It was chiefly to the dose administered and to the time of administration in the case under consideration, that we had reference in our previous remarks.

We refer Dr. Daniels to *Braithwaite's Retrospect* for very interesting cases illustrating the relative action of these drugs.

"In regard to the case reported by me, I think you are entirely mistaken in your estimate of its gravity. The patient was not a large woman, and she had taken as much laudanum as Dr. Blake's patient had, without any of the protection against its influence which you attribute to him; and although she was not entirely insensible at the time we began to give the emetics, yet she became so very soon. I think we gave her more emetic medicine than Dr. Blake gave his patient; his operated, and ours did not; and I desire to say now, with all the emphasis I am capable of concentrating upon a single expression, that *they never would have operated*, and the case was made to appear comparatively light by the treatment, and by nothing else. I have not the slightest doubt but that we should have lost her if we had pressed the treatment by forced exercise with such devotion as it was pressed by Dr. Blake.

"It seems there was no time, before Dr. B.'s patient went to the hospital, that he was entirely insensible, but ours had not the least consciousness at the time we pumped the stomach. I strongly suspect now that more good was done by filling her stomach from time to time with clean water, than we had any idea of when we did it."

We have no fault to find with this treatment—the event shows its judiciousness. We would only remark that Dr. Daniels here confirms our view that the emetic may remain inert and innocuous in the stomach, and that the effect on the patient in such cases is not to be measured by the quantity administered. And here we would take leave of the subject, hoping that its discussion may have had the effect of awakening a new interest on the part of our readers in these very important cases.

SUFFOLK DISTRICT MEDICAL SOCIETY.—At the Annual Meeting of the Suffolk District Medical Society, held April 6th, 1864, the Secretary announced that the following gentlemen had joined the Society since the last annual meeting:—Drs. Alex. M. Wood, Geo. B. Windship, John J. McSheahy, J. McLean Hayward, Thos. B. Hitchcock, Nath'l Greene, Jr.

The following members have deceased:—Drs. N. K. Gunn, John Stevens, David Roberts, James W. Stone, Chas. A. Davis, Sam'l H. Keep, George Hayward, J. C. Dalton, J. A. Tarbell.

The following gentlemen were elected *Officers of the Society*, for the ensuing year:—*President*, Dr. J. Mason Warren. *Vice President*, Dr. Francis Minot. *Secretary*, Dr. D. W. Cheever. *Treasurer*, Dr. C. D. Homans. *Librarian*, Dr. C. Ellis. *Supervisors*, Drs. G. H. Gay; D. McB. Thaxter, *S. Boston*. *Commissioner on Trials*, Dr. S. Durkee. *Censors*, Drs. F. E. Oliver, H. W. Williams, C. D. Homans, J. N. Borland, R. M. Hodges. *Councillors*, Drs. J. Bigelow, J. Homans, J. Jeffries, P. M. Crane, *E. Boston*, J. Flint, D. H. Storer, H. Dyer, S. Morrill, A. A Watson, A. A. Gould, J. B. S. Jackson, E. Palmer, H. I. Bowditch, H. G. Clark, J. B. Forsyth, *Chelsea*, J. M. Warren, G. C. Shattuck, J. W. Warren, C. E. Ware, W. J. Dale, S. L. Abbot, J. Ayer, W. W. Morland, S. Cabot, Jr., W. E. Coale, G. Hayward,

J. S. Jones, H. J. Bigelow, B. Brown, F. Minot, A. B. Hall, E. H. Clarke.
DAVID W. CHEEVER, *Sec'y.*
Boston, April 8th, 1864.

CORRECTION.—Our readers may remember a communication concerning a remarkable case of fecundity which appeared in the JOURNAL of January 7th of this year, signed M. M. Pomeroy, M.D., La Crosse, Wisconsin. By the side of the well-known instance in New York city of 12 children in 42 months, published in the JOURNAL, May 22d, 1862, there seems no improbability in it, but we have since ascertained that no such case ever occurred, and that the whole account was fabricated by the editor of the *La Crosse Daily Democrat*, bearing the above name. We have seen a copy of this paper, in which he congratulates himself upon the success of his hoax. On further examination of the sheet, our wonder that a man should be willing to publicly pride himself upon deliberate falsehood ceases.

MEDICAL COMMENCEMENTS.—The annual commencement of the College of Physicians and Surgeons, New York, was held recently, and the degree of Doctor of Medicine was conferred on seventy-two candidates. The first *thesis prize* of $50, on the treatment of aneurism, &c., was given to Thomas T. Sabine, A.B., of New York; and the second, of $25, on the urine, to Platon Vallejo, of California. The *Harsen prizes* for clinical reports of practice at the New York Hospital were awarded—1st, medal and $150 to James W. McLane, A.B., of New York ;2d, medal and $75 to David Magie, Jr., A.M., of New York. The *Stevens prize* of $100, for anatomical preparations of the larynx, was given to Samuel F. Chapin, of Massachusetts. The orator of the alumni was Joseph Mauran, M.D., of Providence, R. I.

The commencement of the Medical Department of the University of New York was held on the 4th of March. The degree of M.D. was conferred on fifty-nine gentlemen, and certificates of honor on twelve. Prof. Mott's Bronze Medal and Prof. Metcalf's first and second prizes were awarded to Drs. C. M. McLaurie, James Moore and W. H. B. Post.

The annual commencement of Bellevue Hospital Medical College took place March 3d. The degree of M.D. was conferred on 95 graduates, who were addressed by Prof. Austin Flint. The services were held in the Academy of Music Hall, which was crowded with an interested audience.

At the fifth annual commencement of the Chicago Medical College, held on the 1st ult., the degree of M.D. was conferred on seventeen candidates.

The commencement exercises of Starling Medical College, Columbus, Ohio, took place March 1st. The class of the past season has been larger than for several years, and thirty-two of the number were graduated with the degree of M.D.

At the annual commencement of the Jefferson Medical College, holden on the 10th ult., the degree of M.D. was conferred on 124 graduates. The number of matriculants the past year was 351. The valedictory address was delivered by Prof. Robley Dunglison.

The commencement of the University of Pennsylvania took place on the 12th ult., and 101 medical graduates received their degrees. The number of students matriculated for the course was 401. Prof. R. A. F. Penrose delivered the valedictory.

The Medical College of Ohio, at Cincinnati, held its annual commencement in the amphitheatre of the College on Tuesday evening, March 1st, and the degree of Doctor in Medicine was conferred upon thirty-one graduates.

The commencement exercises of the Buffalo Medical College were held on February 23d, the graduating class numbering forty-one.

Dr. Daniel Lord gives, in the *American Medical Times*, the following description of a new method of treating smallpox, which is said to be generally adopted in the English army in China. "When the preceding fever is at its height, and just before the eruption appears, the chest is rubbed with croton oil and tartar emetic ointment. This causes the whole of the eruption to appear on that part of the body, to the relief of the rest. It also secures a full and complete eruption, and thus prevents the disease from attacking the internal organs."

Dr. Homer O. Hitchcock, of Kalamazoo, Mich., is preparing a paper on the Entrance of Air into the Uterine Veins in forced Abortion, to be read at the meeting of the American Medical Association.

E. Brown-Sequard, M.D., arrived in New York in the Persia on Wednesday of last week.

The mortality of Sacramento, Cal., during 1863, was 380—the ratio of deaths for the year, in a population of 103,000, being about 1 in 45.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, April 9th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	71	57	128
Ave. mortality of corresponding weeks for ten years, 1853—1863,	38.3	36.4	74.7
Average corrected to increased population - - - -	00	00	82.08
Death of persons above 90 - - - - - - -	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
25	4	10	10	4	0	0	2

Pamphlets Received.—Report of the Committee appointed to investigate the alleged Abuses at the House of Reformation and House of Correction. (From Dr. Walker.)

Deaths in Boston for the week ending Saturday noon, April 9th, 128. Males, 71—Females, 57.—Abscess, 1—accident, 1—anæmia, 1—apoplexy, 4—congestion of the brain, 1—disease of the brain, 4—inflammation of the brain, 3—burns, 1—cancer, 1—consumption, 25—convulsions, 6—croup, 4—cyanosis, 2—debility, 1—diarrhœa, 2—diphtheria, 2—dropsy, 1—dropsy of the brain, 5—dysphagia, 1—erysipelas, 5—scarlet fever, 10—disease of the heart, 4—infantile disease, 1—disease of the kidneys, 1—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 10—marasmus, 2—old age, 3—paralysis, 2—peritonitis, 1—pleurisy, 1—premature birth, 1—puerperal disease, 4—rheumatism, 2—shot, 1—smallpox, 4—unknown, 4—polypus of the uterus, 1.

Under 5 years of age, 40—between 5 and 20 years, 14—between 20 and 40 years, 29—between 40 and 60 years, 24—above 60 years, 21. Born in the United States, 82—Ireland, 35—other places, 11.

THE

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THE USE OF HEAT AND COLD APPLIED TO THE SYMPATHETIC NERVOUS SYSTEM.

By Virgil W. Blanchard, M.D., Bridport, Vt.

[Communicated for the Boston Medical and Surgical Journal.]

In No. 25 of Vol. LXIX. of this Journal, a paper on Diphtheritis was issued under my name. Since its publication numerous inquiries have reached me respecting the theory that I propose in that article, which it may not be improper to answer at this time. Before I proceed to its discussion, however, I will state, in answer to other inquiries—that I do not apply the ice or the cold dressing in diphtheritis merely "to the inflamed tissue" or "to the swelling in the laryngeal region" that usually accompanies the disease, but *invariably* to that portion of the cervical region, beneath which is situated the superior cervical ganglia of the sympathetic nervous system, allowing it to extend backwards to the spinous processes of the vertebræ. In this respect my treatment differs from any previously proposed. I would also state that I consider the application of the hot dressing to the site of the ganglia of the sympathetic system in the spinal region, and to the spine itself below the shoulders, secondary in importance to the refrigerant dressing applied in the cervical region, yet no severe case can be treated successfully without it; that I have found the use of iron in combination with strychnine not absolutely necessary to the recovery of the patient, but to hasten convalescence, and to prevent in a great measure the occurrence of those symptoms of debility of the motor portions of the cerebro-spinal nervous system that so frequently accompany and follow severe cases of diphtheritic disease; that I place no reliance "on gargles" or "internal applications to the throat, astringent or stimulant," "as radical means of cure";—yet when the disease is excessively putrid in type chlorinated washes may be used, in my opinion, with advantage—as such, the chlorate of potash and the muriate of ammonia I prefer. The alterative effect produced by the internal administration of the muriate of ammonia in the initial stage of the disease, I believe to be in some cases highly beneficial. As will be seen in the following portion of this paper, the theory that I have advanced respecting diphtheritic disease was not "extemporized to suit a certain system of practice," but is a "specimen brick" of a general theory from which a system of practice naturally arises that I have adopted for the past four years, in many instances with the happiest results. I "continue to apply the same treatment in diphtheritic disease that I advise," even in the most malignant cases, with unvarying success. I now propose to discuss briefly the importance of the sympathetic nervous system as a dominant tissue in the animal body, the important part its centres play in inflammatory processes, and to give an outline, at least, of a general theory and a system of practice founded thereupon, that I have adopted in many instances with the most flattering success.

The sympathetic nervous system presents to the student a field of inquiry that is rich in physiological and therapeutical interest. Its importance as a dominant tissue in the animal structure to which it belongs cannot be over estimated. Its functions controlling those of the organic glandular and circulatory systems, are manifestly second to none in the animal body. It is the fountain and channel of organic life. It is the agent that prepares from the blood in the wonderful laboratories of the secretory organs those fluids that are necessary in the various processes of the animal economy. It is the indirect force that reduces the aliment to primitive elements, and the probable one that diverts into the blood those that are requisite and assimilable, and the direct one that rolls this fluid in rythmical currents through the arterial channels that permeate the animal tissue. The cerebro-spinal nervous system through intellection, locomotion and muscular adaptation, provides the aliment, while the sympathetic is probably that which fabricates out of its appropriate elements the various tissues that enter into the composition of the animal body.*

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* In this view taken of the sympathetic nervous system, it is considered *indirectly*, in part, the sole agent, from which are derived the organic forces that supply the body. That the sensitive nerves of the cerebro-spinal system have an office, and an important one, in the organic processes of nutrition and secretion, cannot be denied. The experiments, however, of Magendie and Longet, showing that destructive disease of the eye occurs much more quickly after the division of the trigeminal nerve in front of the Casserian ganglion, where it is joined by the sympathetic fibres which pass with it to the eye, than when the division is made between the ganglion and brain, seem to prove conclusively that the influence of the sympathetic is much greater than that of the sensitive nerves. As the *sole* agent of distribution, not of elaboration, the sympathetic centres are considered the fountain of secretory and nutritive vitality. On this point the opinions of Kirkes and Paget seem to me to be the best fortified and the most conclusive. They remark, in their Manual of Physiology, page 372—"Probably, therefore, the safest view of the question is to regard all the processes of organic life in man as liable to the combined influences of the cerebro-spinal and the sympathetic systems; to consider that those influences may be so combined as that the sympathetic nerves and ganglia may be in man, as in the lower animals, the parts through which the ordinary and constant influence of the nervous force is exercised on the organic processes; while the cerebro-spinal nervous centres and their ganglia are the parts from which the proper sympathetic ganglia derive supplies of nervous force, and from which, more often and more regularly than in the lower animals, the processes of the organic and the animal life are made to work in connection and mutual adaptation."

From this stand-point, and this alone, can be appreciated the importance of the functions of the sympathetic nervous system to the health and welfare of the animal body.

It should, however, be borne in mind that the nervous tissue is the only seat in the animal body of *actual force*, that all the organs and apparatuses of which it is composed are only passive instruments or agents for its awakening, life-giving power. As the student investigates the processes of life, as exhibited in the animal body, from the obscurity and doubt that overshadow some of the functions of the nervous tissue he is apt to lose sight of its importance as the fountain of the *vis a tergo* that endows other less obscure organs with all their wonderful capabilities, that so challenge the admiration and arrest the attention. Indeed, it seems to me that the agency of the nervous tissue in all of the vital processes in the animal economy, especially that portion from which originate the secretory and nutritive forces, is ignored too much by medical students and authors of the present day. A disease, whatever it may be, is "all lung," "all liver," "all kidney," or "a complication of visceral difficulties," as the case may be, according to the opinion of too great a proportion of those whose decisions illustrate the science of medicine in our country. That one or more of these important organs, in each instance, may be diseased, I do not doubt; yet behind them in the nervous tissue, by whose secretions their capabilities and powers are awakened into activity and usefulness, is the primary trouble and derangement. To aim a blow at the seat of the disease, whatever it may be, forms at least a part of the most efficient therapeutical endeavor that the human mind can devise.

These considerations have led me, during the past four years, to attempt to make a more direct application of certain therapeutical agents to the primary seat of disease, viz., the nervous centres, than I find advised by the most prolific and erudite writers on the theory and practice of medicine. In this investigation my attention has been directed chiefly to the ganglionic centres of the sympathetic nervous system. The therapeutical agents that I have used in this connection the most freely and successfully are heat and cold. These two agents are of course applied externally. The idea of applying heat and cold externally upon the ganglionic regions of the sympathetic nervous system, as therapeutical agents, was suggested to my mind by witnessing operations in the office of a dentist friend, in which cold applied to the patient's jaw became an anæsthetic agent of sufficient power to enable the operator to extract teeth without pain and without injury to the patient. The fact of being able to accomplish this refutes the objection raised by some against this mode of practice, "that the centres of the sympathetic nervous system lie so deeply beneath the surface as to be entirely unaffected by the external application of heat and cold." It is highly probable that the effect of either agent, especially that of cold, when experienced even in a slight degree by the tissue of the sympathetic nervous system, modifies more or less the elaboration and transmission of the *spiritus vitalis*, or its own proper secretion.*

May this not afford an explanation to the fact, that when the sympathetic ganglia in the spinal region (assuming that this portion of the sympathetic system governs the organic functions in the cutaneous system) are in a state of excitement and the individual is perspiring freely, a cold current of air coming in contact with the region of the spine at once checks the perspiration and is sometimes followed by a chill and some local congestion?

Where diaphoresis is desired, the happy result that follows the application of the hot dressing to the site of all the sympathetic ganglia in the spinal region, is another proof of the susceptibility of the nervous centres beneath to external applications. In the cervical and in the upper portion of the dorsal region the remoteness of the nervous centres of the sympathetic and cerebro-spinal systems from the external surface cannot be urged as an objection to the probability that their tissues may be deprived, partially or completely, of the power of elaborating and transmitting their secretions of nervous force or fluid, or may be stimulated to a greater efficiency in function by the proper application of the refrigerant or hot dressing to the epidermis above them. The happy results that follow the proper application of each dressing in various diseases abundantly substantiate this point.

It has been my experience that inflammatory processes, occurring in only those organs that are supplied with sympathetic and sensitive nerves arising from nervous centres *above* the sixth dorsal ganglia of the sympathetic system, are immediately cut short by the treatment I advise. Inflammatory processes occurring in other organs of the body are restrained and modified by the application of the same principle of treatment, but in less degree. Inflammatory processes occurring in any tissue or organ supplied with sympathetic nerves arising from nervous centres above the third cervical ganglia of the sympathetic system, are the ones that are the most successfully treated by this mode of practice; as at this point, or at any point in the cervical region, the nervous connection between the cranial portions and the rest of the sympathetic and cerebro-spinal nervous systems may be partially or completely broken by a proper application of the refrigerant dressing.

Besides the direct stimulant and sedative effect produced by the application of the refrigerant and hot dressing over the site of certain ganglia of the sympathetic system, a similar or miniature one is probably experienced by adjacent and perhaps remote centres belonging to the same system, resulting from sympathetic impression or conduction of the peculiar state or condition of the centres receiving the direct impression. Thus by applying the refrigerant dressing to the superior cervical ganglia of the sympathetic system, not only is the elaboration and transmission of the *spiritus vitalis* retarded and perhaps abolished in their tissue, but the state or condition they experience during its effects is sympathetically assumed by adjacent and even remote ganglia belonging to the same system. This sympathy finds an analogy in certain diseases incidental to the cerebro-spinal nervous system.

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* In every instance when the application of the cold and hot dressing is advised in this paper, it should be understood as applying not only to the two principal trunks of the sympathetic nerve in the spinal region, but to corresponding portions of the spine itself. This is necessary in order to control the functions of the sympathetic spinal ganglia seated upon the posterior or sensitive roots of the cerebro-spinal nerves.

Excepting in certain diseases, where the hot dressing should be applied over the site of all the ganglia of the sympathetic system, the refrigerant dressing should be applied only over those ganglionic centres that distribute sympathetic nerves to that portion or organ of the body in which the inflammatory action is occurring; while the hot dressing should be applied over the site of all those numerous centres that supply with organic vitality those portions of the body that are only sympathetically involved. Besides this effect, that of isolating partially or completely in its nervous connection that portion or tissue of the body where the disease may exist, from that portion that is only sympathetically involved, is to be desired.

The domination of one ganglion of the sympathetic nervous system over adjacent ones or over the entire system when stimulated or excited by morbid agency, is beyond question. That each ganglion possesses the capacity, during a period of health in the animal body, to secrete or originate a sufficient volume of the *spiritus vitalis* to carry on normally the functions of nutrition and secretion in the tissue to which it distributes nerves, with the aid afforded by corresponding sensitive nerves, is admitted by all. In fact it will be plainly seen that the integrity of the organic processes in the aggregate, or the organic health of the body, is dependent upon a *complete* fulfilment of the functions of *each* ganglion belonging to the sympathetic nervous system. This would of course include a normal distribution of the nervous force or fluid, as well as a normal elaboration.

That the nervous force may be diverted from its proper channels and become subservient to other purposes than to fulfil the functions of the ganglion that produced it, is manifest in many of the morbific processes occurring in the animal body.

This condition, or an abnormal distribution of the nervous force, underlies, in my opinion, all inflammatory processes excepting those of a specific or malignant character. It explains many of the phenomena incidental to inflammatory action that are otherwise difficult to understand. It explains the deficiency of action in the secretory glands and the impaired nutrition in all the tissues of the body, excepting the one involved, which characterizes a virulent inflammatory action. Taking this view of the subject, in symptomatic fever supervening after a severe gun-shot wound, we see the organic forces of the body, or the *spiritus vitalis*, flowing from all the rest of the ganglionic centres of the sympathetic system to the aid of the nervous centres that distribute sympathetic nerves to the tissue or organ that sustains the lesion. We have, as the result, a diminished circulation and an impaired nutrition in the rest of the body. The entire sympathetic nervous system represents a certain available force that is just sufficient to fulfil normally the organic functions of the body; and if in a certain tissue or organ the process of reparation is superadded to that of nutrition and secretion, it logically follows that in the rest of the body organic vitality must be diminished.

[To be continued.]

CASE OF TRAUMATIC TETANUS, TREATED BY DR. L. BARTLETT, OF NEW BEDFORD. APPARENT RELIEF FROM STRYCHNINE.

[Read by Dr. HENRY I. BOWDITCH at the meeting of the Suffolk District Medical Society, March 26th, 1864, and communicated by him to the Boston Medical and Surgical Journal.]

EZRA SHAW, of Carver, Mass., called on me Jan. 14th, 1864, in New Bedford, and gave the following account of himself. "Age, 48 years; height, 5 feet 8 inches; weight, 135 lbs; light hair and complexion; occupation, farmer." Three weeks previously, whilst chopping in the woods, inflicted a pretty severe cut with his axe in the instep of the left foot. One week afterwards, whilst chopping in the woods (about Jan. 1st), cut off the thumb of the left hand, just below the second joint.

The foot soon healed, and the thumb was healing well up to the 7th or 8th of January, when he made two or three applications to it of "*burnt alum*, on account of proud flesh." The alum caused much irritation. On the 12th, began to experience difficulty in opening his jaws and in swallowing, and arranged to start for New Bedford. On the 13th, could only partially open his jaws; had pain in attempting to chew solid food, and considerable difficulty in swallowing. Started for New Bedford. Experienced some vexations and threatened delays on the way, which aggravated above symptoms.

When I first saw him, on the 14th, at 12 M., he could open his mouth about one third of the way, so as to protrude the tip of the tongue. He had but three teeth in the upper jaw, one incisor and one bicuspid on the right side, and one molar on the left side. He had frequent, almost constant chills, accompanied with sweating. Tongue coated; no appetite; complained of much pain through the jaws on attempting to open them or to swallow. Some pain in the back, and pain and stiffness in the legs, especially in walking. Some pain and stiffness in the muscles of the neck. Bowels constipated. Ordered hot foot-bath, to be continued for *one hour;* two compound cathartic pills at bed-time, to be followed by Nichols's cold infusion of senna in the morning. Flax-seed and meal poultice, well covered with *snuff* upon its surface, to be kept applied to the throat and sides of the neck. Flax-seed poultice to thumb.

15th, evening.—Was somewhat relieved after foot-bath, but passed a restless and distressed night. Cathartic operated in the morning. Had had frequent spasms of the jaws, biting his tongue—spasms of the muscles of deglutition on attempting to swallow. Pain through the jaws and throat constant and greatly aggravated by attempts to swallow. Jaws more closed and rigid. Muscles of back of neck rather stiff. Some spasmodic action of the diaphragm and muscles of abdomen during the night; chills and sweating have continued almost constantly since yesterday. Any movement of the body excited spasmodic action of diaphragm and abdominal muscles ("drawing spells," he called them). Abdominal muscles tense and rather unyielding. No appetite. The tip of tongue only could be seen. Ordered ginger tea; beef tea; milk porridge. Foot-bath and poultice to be repeated. Five drops of strychnine in water every two hours (Marshall Hall's solution—one grain to the ounce).

16th.—Symptoms much the same, but increased in severity. Legs somewhat relieved by foot-bath. Jaws more closed. Complained much of distress in the stomach, but said the medicine (strychnine) "always made it feel better." Ordered strychnine increased to eight drops every two hours. Teaspoonful tr. sumbul. every two hours in intervals of strychnine, for the distress in stomach. His general condition and symptoms grew gradually worse until the 19th. Omitted the sumbul after two doses, as "it distressed him." Had taken fifty drops of McMunn's elixir of opium on nights of 17th and 18th, but it nauseated and distressed him, as he said opiates always did. Bowels had been moved by cathartic medicine, and strychnine had been increased to ten drops every two hours, which, he said, "always made him feel better."

On the 20th, his jaws were firmly closed, and the spasmodic action of the muscles of the throat, diaphragm and abdomen were frequent and severe. The recti muscles of the abdomen seemed as rigid and tense as a ship's hawser, and perfectly unyielding to pressure. Had some spasms in his legs; muscles of neck stiff, and neck bent a little backwards. Chills and sweating continued. Was able to swallow liquids, but with difficulty. Strychnine was now increased to fifteen drops every two hours—equal to three-eighths of a grain in twenty-four hours. Snuff poultice continued to throat, and bottles of hot water kept applied to back and legs. This treatment was continued until the 24th, during which time his symptoms became gradually ameliorated; took more nourishment, and could open his jaws a very little way; recti muscles less tense. He now showed some trembling spasmodic action in the legs and arms, which was attributed to the strychnine. He complained also that the medicine *now* distressed him. The strychnine was now omitted for twenty-four hours, and one grain of quinine every four hours was substituted.

He had had no chills for two or three days, and the sweating was much diminished. Snuff poultice was now omitted—the skin of the neck having become much irritated by it, and a bat of sheep's wool substituted for it.

On the 25th, continued to improve in all respects. Quinine was continued every four hours, and fifteen drops of strychnine in the intervals of the quinine, every four hours, up to the 28th, when the quinine was omitted and the strychnine given only three times a day, fifteen drops at a time.

He could now open his mouth to nearly its full extent. The rigid tension of the recti muscles had passed off, but he had, occasionally, the "drawing spells" during the night.

Feb. 15th.—Has been steadily recovering since last date. Can open his mouth to full extent, and seems in all respects well. He has taken no medicine for a week, nor shown any symptoms of the disease. His thumb is not quite healed as yet.

He had no knowledge of the nature of his disease until after he became convalescent. Leaves for home this afternoon.

Marshall Hall's solution of strychnine:—℞. Acet. strychnia, gr. i.; acet. acid, ʒ ss.; alcohol rect., ʒ ij.; aq. dist., ʒ vj. M. Dose, five to twenty drops.

THE MICROSCOPIC STRUCTURE OF THE HUMAN HAIR.

M. Pruner-Bey, of Paris, the late physician to the Viceroy of Egypt, has just published a most important memoir on human hair, in which the researches which this observer has undertaken with the microscope are detailed, and illustrated with a series of the most valuable original drawings.

From the highest antiquity, the hair of the human species has attracted the attention of observers, but until a recent epoch, merely the color of the hair and the outward appearance have been characterized. These easily recognizable characters have been described both in individuals and in nations, and now modern science, aided by the microscope, has enlarged the sphere of our knowledge. Heusinger noticed that in the negro each hair formed an elliptical section, which fact was afterwards proved by Kölliker. Browne, in Schoolcraft's work on the American tribes, published detailed researches, in which he alleged that specific differences prevailed between the hair of the "Aryan," the negro, the Chinese, and the native American. M. Pruner-Bey was induced to take up the question in detail on account of the great state of confusion in which the subject appeared to him. He has carried on a microscopical examination of the hair of the different regions of the body, especially of men and the anthropoïd apes. No accurate information was afforded him respecting the hair of the races of North America and Higher Asia, but he considers that his induction is sufficiently vast to generalize respecting the hair of the other races of mankind. The external character of the hair he reviews at great length, from the coarse and smooth type, almost reaching the heel, of the Blackfoot or the Sioux Indians, to the contortuplicated tufts, which scarcely touch the shoulder of the negress or the Bosjesman. The length of the hair is a variable character in the two sexes of the same origin, whilst it is so much under the influence of climate and hygiene, and varies even in individuals of the same family, that it is not of great classificatory value. The abundance of hair, also a variable character, is dependent on the general rule that the more fine and supple the hair is, the more hairs are implanted in a given space. The color of the hair, which appears, on the one hand, to bear some amount of correlation with that of the skin and of the iris, on the other hand offers more or less persistency as a race-character. Black hair is to be found in every part of the globe—equatorial, arctic, or temperate; whether in the Esquimaux, Negro, Brahminic Hindoo, Malay, or in many Europeans. The light-haired races, of whom the tint varies through the imperceptible shades of flaxen, yellow, straw-yellow, golden-yellow, red, fiery-red, reddish-brown, clear brown, dark or chesnut-brown, are nearly as widely spread, and indicate, especially the clear blonde tint, the Germanic, Sclavonic and Celtic divisions of the "Aryan" race, the Finnic branch of the Turanians, in the Caucasus, Armenia, amongst the Shemites of Syria, sometimes amongst the Jews, and perhaps in Africa amongst the Berbers of the Atlas. Red hair, on the other hand, is represented amongst all the known races. The color alone of the hair M. Pruner-Bey considers to be inadequate to characterize race. The head of hair becomes smooth when the individual hairs are rectilinear, curled when they curve at their extremities, frizzled when they are composed of curves throughout their whole length, and crisp when they are disposed in more or less large rings which resemble those of wool. In the majority of the races of mankind the hair issues obliquely out of the cutaneous envelope; on the Hottentot, Papou, and many negroes, the hair is implanted perpendicularly. M. Pruner-Bey enters into length as to the differences in the hair when microscopically examined in its longitudinal direction, which, again, he considers insufficient to indicate race-characters. As regards the transverse sections, their examination forms the most striking part of our author's paper. This method permits the examination of the contour of the hair, its diameter and thickness; the ascertainment of the presence or absence of a medullary substance, and of its relations with the cortex. In the negro the hair is elliptical and exceedingly flat; the medullary substance is not always present; the centre is never empty. In the Papou the medullary substance is usually present; but the central spot which indicates it is more narrow than in the negro. This central spot is also very conspicuous in the New Zealander, Malay, some Australians, Japanese and Chinese. Pruner-Bey proceeds with the microscopical analysis of the hair in the less-known races of South America, which we pass over, as the whole subject is too complicated to be treated in brief. A similar analysis is carried on of the crinal characters of the other races of man, and of the male and female chimpanzee, male and female gorilla, oran-utan, gibbon, and baboon, the following being M. Pruner-Bey's chief conclusions:—That microscopical examination shows more diversities of aspect than are presented by the human hair to the naked eye; the more the hair is flattened the more it is curled; and the more it is rounded the more it becomes smooth and coarse. One of the extremities of the scale is represented by the Papous, the Bosjesmen, and negroes; the other by the Polynesians, Malays, Siamese, Japanese, Turanians, and Americans, without excepting the Esquimaux; the Aryans occupy the intermediate space. The Basques differ as much from the Aryan stock by their hair as by their language. Mixed breeds are recognizable by the fusion and juxtaposition of the characters inherent in the hair of their relations. The form of the hair produces more characteristic differences than the anatomical disposition of the constituent elements. Anatomically, there is only to be taken into consideration the transparent centre deprived of medullary substance in some branches of the Aryan race. But the fine points of the hairs belonging to the allophylletic races present the same peculiarity. One single hair, when it presents the average shape characteristic of the race, may distinguish it; but, without pretending to this degree of certitude, it is indubitable that the head of hair of each individual bears the mark of its origin. Although there are appreciable differences of form between various hairs in the same individual, extreme forms are only to be met with on the same head where there has been a mixture of blood. The hair, according to M. Pruner-Bey's method, appears to have an incontestable value in the study of inherent characters of the human races. Some will find transitional forms, as, for example, from the Polynesian to the Melanesian; from the Malay and the Lithuanian to the Turanian, &c.; from these and from the Basque to the American; while others will, perhaps, signalize, with as much energy and justice, diverse and constant forms, even in this insignificant appendix of the skin. M. Pruner-Bey concludes by saying that the form of the hair is as certain as that of the shape of the skull, although the importance of the two characters may be unequal.

Such startling conclusions can only be accepted on the best evidence; and we hope that our readers may examine carefully the three lithographed plates which accompany the memoir, which seem to bear out the important generalizations of the French author, and to afford a new proof of the importance of the microscopical method of biological investigation.—*The Reader,* London.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

MARCH 28th.—*Case of Aortic Aneurism.*—Reported by Dr. BOWDITCH. A. B., barber, colored, æt. 48. Seen Feb. 26th, 1864. Had been well till rheumatic fever last June, when trouble in heart came on and cough. Both of these difficulties had continued. During the summer his wife perceived that he had some difficulty in getting up hill, and was a little unwell, although daily at his employment until about two weeks before Dr. B. saw him. At that time he became hoarse, and began to have dysphagia, with much soreness of the throat. The cough, though sounding loose, was really without sputa, till two days before Dr. B. saw him, when he raised a very little white mucus. The dyspnœa also had increased, so that he had been unable to lie down at night, but sat up, with head bent forward. No hectis. Appetite good, but unable to swallow, owing to pain and soreness of throat. Digestion good. Bowels regular. Cod-liver and fusel oil had been administered by another physician, previously in attendance. When Dr. B. first saw him he was very hoarse, and looked like a man suffering from some serious obstruction of the vocal cords; he wheezed with every breath, and on attempting to swallow he made many grimaces, and bent his neck in the peculiar way any one having a sore throat is apt to bend it, in order to ease the descent of the substances swallowed. The heart was much hypertrophied, as marked by dulness on percussion, and had a heaving impulse over a large space. Its apex beat outside of the left nipple. A *saw-mill* murmur over aortic valves, and a little above them. Dr. Ellis, who saw him a few times in June, heard a strong bellows murmur at that time. Sounds in lung obscured by noise of throat, which was constant. On examining the throat, Dr. B. expected to find some redness, and probably thickening of the epiglottis; he was, on the contrary, surprised to find all the parts pale, and the epiglottis peculiarly so. The sudden nature of the severe attack, and the peculiar breathing, suggested to Dr. Ellis and to Dr. B. occlusion of the glottis. As, moreover, there was so much difficulty in swallowing and soreness complained of, Dr. B. ordered the following, to be applied thrice daily over the larynx:—Tannin, ʒi.; glycerine, ℥i. Also the following—glycerine, olive oil, simple syrup, equal parts, one drachm to be slowly swallowed, if grateful, as often as he wished. Fluid extract of opium, gtt. xv. *p. r. n.*, and, if great dyspnœa, inhale ether.

On the 27th, Dr. B. found he had very severe pains in the right side of chest, with a "stuffed feeling." He was able to speak aloud immediately after the application of tannin, and the throat was less sore. Both of these results tended to support Dr. B.'s view of there being something amenable to treatment about the larynx.

From this time till March 8th, when death took place, the symptoms were as follows:—Always dyspnœa and hoarseness, or peculiar obstruction of voice. There were pains above the right side of the chest. The soreness in swallowing subsided wholly. From being unable to swallow anything before the treatment, he ate plentifully with relish, and nothing but the slight twist of the neck, named above, was observed in each act of swallowing. Digestion good. The pulse was not peculiar; it was of medium size, not unusually rapid, equal in both wrists. Cough slight, peculiar, as if from obstruction, but not hoarse or crowing. His easiest posture was sitting, or walking the room. He could not lie.

On March 8th, I prescribed for the dyspnœa digitalis, ½ gr., colchicum seeds and bicarbonate of soda each gr. i. three times daily.

On the 12th, just fifteen days from the commencement of treatment, he awoke at night with a sense of suffocation, and went to the window, opened it, put his head out for air, and then raised, for the first time, about half an ounce of pure blood, and the same quantity in the room, and died almost instantly.

Dr. Bowditch had *suspected* an aneurism from the persistence of the dyspnœa and hoarseness, while there was absence of any apparent redness and swelling of the fauces. But the cause of the disease, rheumatism, with subsequent valvular lesion and hypertrophy of the heart, the equal pulse in the two wrists, the absence of *crowing* cough, the absence of any change in either lung, save a general obscurity of the murmur in both, the comparatively recent occurrence of the severe dyspnœa—all these circumstances tended to make the diagnosis obscure. It is to be regretted that the peculiar sign mentioned by Dr. Gairdner, of Edinburgh, viz., a difference in the size of the pupils, observed in some cases of aneurism of the aorta, was not looked for. If any difference existed it was not very evident. Still, the peculiar hoarseness, the pains in the chest, the stuffed feeling, the dysphagia, might have led to a more decided diagnosis, as they all point to aneurism. The physical signs about the lungs and heart, however, could not have helped the diagnosis. The sudden death, with hæmoptysis, made it almost certain that a small aneurism was the cause of the phenomena.

An autopsy was made by Drs. Bowditch and Ellis, on the following day.

It will be seen that the pressure on the trachea, and not on one of the divisions of it, or either lung, must necessarily have caused a *general* lessening of the murmur, and not any special diminution of it in one lung more than in the other, which often aids the diagnosis of aneurism. So the perfect freedom from obstruction about the vessels given off from the aneurism prevented any peculiar change of, or difference in, the pulse of the two wrists. The cartilages of the ribs were strongly ossified. The lungs looked well. They did not collapse, and were of great size; emphysema was general, but especially on the front edge of the left. They were quite œdematous, but otherwise normal. A white old patch over right ventricle of heart. Slight old adhesions about vessels. The left ventricle was hypertrophied. With the exception of slight opacity, the valves were normal. The aorta was thickened, rugous and atheromatous. At the point of origin of the right brachiocephalic vessels was an abrupt dilatation, about three inches in diameter, which extended both outwards and inwards, overlapping the trachea. Through the mouth, which was upwards of an inch in diameter, the opening of the vessels were seen at the fundus. Subclavian thickened. No coagula. In the trachea, about midway between the vocal cords and bifurcation, opposite the aneurism, was an ulcer about two thirds of an inch in diameter, which exposed parts of three rings, and involved the membranous portion. Half an inch lower down in the anterior wall were two rounded projections, perhaps two lines in diameter, and from one of these the blood had evidently escaped. Coagula were found in the air-passages below. No disease of the larynx. The pneumogastric ran over the tumor, and was much flattened. The recurrent laryngeal was seen curving upwards, and must have been compressed and stretched by the aneurismal sac. Abdominal organs looked well. Stomach distended and pale.

MARCH 28th.—*Diphtheria; Tracheotomy; Recovery.*—Dr. CABOT said he had been called in consultation by Dr. DYER, to see a little boy three years old, who had noisy and labored respiration; drowsiness; aphonia; rapid, feeble and somewhat intermittent pulse, and was apparently suffocating, although the color was not dusky. No membrane could be seen in the fauces, though the whole mucous surface had the patchy, unequal color which Dr. Cabot had observed after the false-membrane has been thrown off, and the surface was nearly restored to a healthy state, in the course of diphtheria.

The child was observed to be feverish, Feb. 2d, but was better till the 6th, when Dr. Dyer was called in, on account of the difficulty of breathing. He pronounced the disease to be diphtheria. The patient was pretty comfortable till the 11th, when much dyspnœa came on. He was better again, till the 13th, when decided symptoms of croup appeared, growing worse till 9 o'clock, P.M. He then raised a piece of false membrane, and was much relieved. The difficulty returned on the morning of the 14th, from which time the child grew worse and worse, till 1, A.M., of the 15th, when Dr. Cabot saw him. After consultation with Dr. Dyer, Dr. C. opened the trachea. A large amount of membrane was expelled, but on account of the urgency of the venous hæmorrhage, most of it was lost. The breathing became immediately easy, and the child slept quietly for some hours. He afterwards raised a certain amount of well-marked false-membrane, some of which was forked and branched. The appetite was good, and he took freely of bread, butter, milk, beef, mutton, beef-tea and brandy. Chlorate of potash and mild laxative medicine were also given. The tubes were removed on the ninth day, and on Feb. 26th the patient was well.

MARCH 28th.—*Cancer of the Rectum.* Dr. SINCLAIR showed the specimen. The rectum was encircled with a ring of fungous growth, extending upwards about five inches, and terminating abruptly in a mass of cancerous nodules. A nodule of cancer was seen external to the anal orifice; and some of the glands in the immediate vicinity of the rectum were softened in the centre. The bladder contained half a pint of bloody fluid, but there was no organic disease of the cavity itself, further than some redness and ecchymosis of the mucous membrane, and hypertrophy of the muscular coat.

The patient came under Dr. Sinclair's care in July, 1862, for diarrhœa, which began nearly a year previously, and continued to increase. A trace of blood was occasionally seen in the discharges, and when the latter were at any time solid they were flattened and attenuated. He had no pain in, nor tenderness of the abdomen or rectum, and the chief complaint was the frequency of stools. He was 54 years of age; spanæmic in appearance, active and intelligent. No other member of his family had ever had cancer, so far as he knew. He was treated with various tonics and astringents without success. An examination of the rectum was suggested, but he deferred it from time to time until October, 1863, when he finally consented. The examination resulted in the discovery of extensive cancer of the rectum, consisting of nodular masses, extending from the anal orifice as far as could be reached by the finger. The disease was exceedingly tender, bleeding readily. Large injections were employed for several weeks, diminishing the diarrhœa more than one half, but finally they failed, on account of the growth of the disease, the pain and difficulty experienced in passing the nozzle of the syringe, and the regurgitation of the stream. In February, he had retention of urine, which had come on gradually. On account of the extraordinary sensitiveness of the urethra, it became necessary to etherize him before introducing the catheter. Sixty-four ounces of dark urine were taken from the bladder, and the operation was repeated, under like circumstances, from time to time. His urine dribbled away during the last few days of his life, causing intolerable suffering, to allay which ether was nearly constantly administered. The withdrawal of the urine by catheter did not prevent an early return of this most distressing state of things. By means of the vaginal stem of the Davidson syringe while he was etherized, Dr. Sinclair succeeded in relieving the bowel of a large quantity of fæcal matter. The urine for about 48 hours before death was bloody, and full of a shreddy or fibrous substance, which led to the belief that the disease had penetrated the bladder.

He died from exhaustion, on the 9th inst., and in accordance with a desire expressed by himself some weeks before his death, his body was examined.

Bibliographical Notices.

Leucocythemia; an Essay, to which was awarded the Boylston Medical Prize of Harvard University for 1863. By Howard Franklin Damon, A.M., M.D., Fellow of the Mass. Med. Society; Member of the Boston Soc. for Med. Observation; one of the Physicians and Superintendent of the Boston Dispensary. Boston: 1864.

Although twenty years have elapsed since the recognition of the disease known as leucocythemia, it is as yet too little understood by the profession at large. Many of the most important facts are to be found in the work of Bennett, but the still more remarkable researches of Virchow have been hidden to many in a foreign tongue, while other contributions are scattered through various journals. Nothing, therefore, was more desirable than a compendious treatise upon the subject, which would place within the reach of all the most important points. Such a work we have before us, ornamented with photographs, which furnish the best possible introduction to the external features of the disease, and exhibit most truthfully the microscopic peculiarities of the blood. These, with the unexceptionable print and paper, show that the author has taken that just pride in his work, always necessary to secure the best results. We are therefore led to expect what we find, evidences of a thorough examination of the ideas already advanced, and a considerable contribution of original matter.

In the endless chain of phenomena which characterize this disease, it is not easy to discover its point of origin. The author has therefore wisely devoted considerable space not only to a description of the blood itself, but shows that it probably originates in certain organs such as the lymphatic, thymus and thyroid glands, the spleen and liver. The contributions of Bennett, Virchow and others, are then noticed, and the treatise terminates with the writer's own cases, which certainly present very interesting features.

We spoke of the work as accessible to all, but, unfortunately, the modesty of the writer has led him to publish only a limited number of copies, which he has generously distributed among those whom he considered most interested in the subject. Judging, however, from the cupidity excited by these copies, we shall soon see another edition of a publication creditable not only to the author, but to the city and profession which he represents.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, APRIL 21, 1864.

Transactions of the American Medical Association, Volume XIV., 1863.—It was a source of great satisfaction to us a year since, that the American Medical Association once more resumed its annual sessions, after an interruption of two years. The universal, absorbing excitement of the first of these, caused by the outbreak of the rebellion, and a succession of severe battles at the West about the time when the notices for the meeting were to be issued on the second, were sufficient reasons for the postponement to that time. It was therefore specially gratifying that the next anniversary found the nation bearing up so manfully under its heavy burden that the quiet sessions of our National Association could be again resumed; that the din of arms could no longer drown entirely the milder tones of science. So large a number of the profession, however, were directly or indirectly employed in the government service, that it could not have been expected that the meeting would come up to its predecessors in point of numbers or scientific interest. Nevertheless, the volume before us is creditable evidence that the meeting did its part in keeping alive an honorable zeal for the improvement of our profession and the advance of medical knowledge throughout the land.

The delegates present numbered two hundred and sixteen, and represented seventeen States and Territories. The number of papers read was smaller than usual, but they were valuable contributions to American medical literature. The address, by the acting President, Dr. Wilson Jewell, of Philadelphia, was an able and eloquent appeal for the more thorough cultivation of sanitary science.

The report of the Committee on Medical Education takes an impartial view of the great imperfections and deficiencies existing to such a lamentable extent in our medical schools. It points out the sources of these, and contrasts the superficial character of too much that passes for medical training in the United States with the elaborate courses pursued in the European Colleges. It speaks in terms of praise of the high rank which the medical department of the army has always held, and of its efforts to promote the cause of science. Incidentally it pays a deserved tribute to the Surgeon-General for the wholesome reforms he has introduced, and the stimulus he has given to the whole department under him, which has led to a spirit of improvement unexcelled in its former history. With this an account is given of the great Army Medical and Surgical Museum at Washington, instituted by him ; 'and which will remain a perpetual monument to his wise forethought, furnishing an invaluable school for the study of the effects of the surgical injuries and affections, and the various diseases incident to the war. The report concludes with four resolutions, which, after a slight amendment to the first, were adopted, as follows :—

"*Resolved,* That a thorough preliminary education in English, Latin, mathematics and physics, constitutes an essential pre-requisite to the admission of a student of medicine into the office of a medical preceptor, or as a matriculant of a respectable medical college.

"*Resolved,* That the advancement of medical education demands a more extended and symmetrical course of instruction in the colleges, and a more thorough and impartial examination for the degree of doctor of medicine than at present prevail.

"*Resolved,* That Medical Jurisprudence and Hygiene are highly important branches of medical science, deserving the careful consideration of all medical teachers and schools.

"*Resolved,* That societies for medical improvement—State, district and county—are important auxiliaries to the advancement and promotion of science, and are therefore highly recommended by this body, as valuable levers in the cause of medical education."

The report of the Committee on Medical Literature contains a valuable record of medical publications in the United States since the year 1860. It speaks in favorable terms of the character of the medical journals at present published in the United States. Of these the number still extant is twenty, while twenty-four have been discontinued on account of the war ; one of them, however, the St. Louis Medical Journal, has recently been revived under the most promising auspices. Twenty-seven original works on subjects connected with the medical profession have been published in the United States within the same period, and fourteen new editions of works previously published. The more important minor publications number eighty-five. Of European publications eighteen have been reprinted for the first time, and twenty-one new editions have been issued. It is gratifying to see so large a preponderance of original matter in the above bibliographical record, and it certainly is very creditable to the country, when we consider the trials through which we have been passing. On running over the catalogue we find very few works which are not positively valuable contributions to medical literature, while some of them will take a high place as standard authorities on the subjects of which they treat.

The next paper is on Diatheses, their surgical relations and effects, by Prof. E. Andrews, of Lind University. This is a brief practical treatise, of special interest to all our army and hospital surgeons. Of the use of the tincture of the muriate of iron in the treatment of erysipelas, the author speaks as follows: "Twenty-five to forty drops of the tincture of iron should be given every hour or two, until a full and decisive effect is obtained." * * * "From the efficiency of this remedy in erysipelas, I some years ago conceived the idea of using it as a prophylactic in surgical cases. With this view I commenced to prescribe it invariably after every surgical operation, unless there was some very decisive reason to contraindicate it. This practice I have continued to the present time, with the most gratifying results. I have in this time attended a vast number of wounded and operative cases, applying the prophylactic treatment to nearly all of them. The result is, that since the adoption of this precaution I have not lost a single patient, thus treated, by erysipelas, hospital gangrene, phlebitis, or pyæmia. In fact, I have ceased to count these diseases among the risks of surgical operations, in all cases where good ventilation and prophylactic medication can be secured. My experience is not alone in this matter. Surgeon M. K. Taylor, U. S. Army, and Chief of the Military Hospitals located at Keokuk, at my suggestion, has adopted the same plan. He administers to every wounded or operative case muriated tincture of iron as a prophylactic, in doses of forty drops every three hours. His testimony is that, under this management, erysipelas and pyæmia have absolutely ceased to be a source of danger among the wounded. He reports only one death from these complications, and that was a case already far advanced before it reached the hospital."

The next paper is on the Method of treating Joint-Diseases and Deformities by continued Elastic Extension, by Henry G. Davis, M.D., of New York, and is a full and satisfactory treatise on this successful method of treating these grave cases.

A case of Diarrhœa Adiposa follows, by Dr. John H. Griscom, Physician of the New York Hospital, and is a most interesting account of a case of this very rare disease. This is followed by an analysis of all the reported cases of the kind, and the whole paper will be of permanent value for reference.

The report on American Necrology contains the usual tributes to deceased members of the Association, and is succeeded by the Prize Essay of Dr. Samuel R. Percy, Professor of Materia Medica and Therapeutics in the New York Medical College. The subject is the Physiological and Medicinal Properties of Veratrum Viride, and to this essay was awarded the Gold Medal of the Association for 1863.

This may be fairly called an exhaustive treatise on this very interesting drug. It comes too in very good season, at a time when the profession, both in this country and in Europe, have had their attention very generally called to it, and are very extensively employing it in the treatment of disease. We can barely glance at the leading features of the paper. The first section treats of the Natural History of the veratrum; the second, of its Chemistry and Pharmacy; the third, of its Physiological Action on Animals; the fourth, of its Therapeutic Applications; the fifth is a summary of its Physiological and Therapeutic Action on Man; and the sixth treats of its Mode of Action. After reading the numerous and carefully conducted experiments given, as well as the accounts of its therapeutic action, no man of sound mind can doubt that we have in this drug a very valuable addition to our means of cure. Its effects are most positive, and yet manageable, and it cannot fail to hold a permanent place as a most useful instrument in the hands of the judicious physician.

The concluding paper is on Laryngoscopal Therapy, or the Medication of the Larynx under Sight, by Louis Elsberg, M.D., of New York, and strongly advocates this method of treatment in the diseases of the larynx. It is illustrated by wood cuts of the instruments he employs.

The only thing to be regretted in the proceedings of the last session of the Association is the resolution of censure passed upon the Surgeon-General for his now somewhat famous calomel and antimony order. We think the whole proceeding was ill-advised and out of place, and not calculated to effect the desired end. Personalities should be most stringently excluded from the proceedings of the Association. From what we have heard, we believe the Surgeon-General had good reasons for issuing the order, reasons much more cogent than any amount of negative evidence which can be arrayed against it. A kindly memorial from influential members of the profession, or a committee of the Association, setting forth their grounds of dissent from his opinions and urging his withdrawal of the order, would be much more likely to effect this, than resolutions of angry denunciation. We observe there was a report of a minority of the committee which presented the resolutions adopted, but this report is not given. Various amendments and substitutes to the report and resolutions were offered by different gentlemen, but were voted down. And yet the published record says the resolutions were adopted unanimously. Is this an exact statement of the fact?

THE NEW YORK MEDICAL INDEPENDENT, AND PHARMACEUTICAL REPORTER.—The first number of a weekly medical Journal bearing this name has been issued in New York. It is an octavo sheet of sixteen pages, and is to be published every Wednesday. It promises to do its best for the highest interests of the medical profession; a special department is to be devoted to pharmacy. The present number contains an interesting paper on McMunn's Elixir of Opium, by Prof. Percy, of the New York Medical College. Taking as a text the recent publication in a cotemporary journal of the recipe of this hitherto secret preparation, Dr. Percy gives an interesting history of its introduction into general use, showing that it deserves no special regard by the profession over any other quack medicine. He demonstrates that its claim to be free from the injurious properties of other preparations of opium is entirely unfounded, and that it has obtained a confidence in the minds of the community solely upon the authority of the influential druggist who first introduced it; and that the whole claim of the original contriver of the elixir, was based on an entirely false view of the chemical elements claimed to be eliminated from the opium. The profession is under great obligation to Dr. Percy for his interesting and valuable exposure of this sham. It is their duty to see that it receives no more currency from any recommendation of theirs.

DEATH OF DR. CORNISH, OF NEW BEDFORD.—A correspondent in New Bedford writes:—"I have been requested to announce to you the death of one of your oldest subscribers, Dr. Aaron Cornish, of this city. At the age of twenty-five years he commenced the practice of medicine in the village of Falmouth, where in his profession he gained the good will and kindest regards of the people. During the year 1855 he removed from Falmouth to this city, where he exhibited such skill in his profession that he soon had a large and remunerative practice. On Tuesday, the 7th day of April, he was seized with a fit of apoplexy, which caused his death on the 10th.

I send you these few lines, thinking they may be of some value to perhaps not a few of his numerous acquaintances in the practice of medicine. J. P. T.

City Hospital.—The following named gentlemen have been appointed House Officers of the City Hospital of Boston, to serve until April 1st, 1865:—

Medical Department—Mr. John Dole, Mr. Clarence J. Blake.
Surgical Department—Mr. M. F. Gavin, Mr. D. F. Lincoln.
Ophthalmic Department—Externe, Dr. Edward G. Loring.
J. N. Borland, M.D., *Sec. Med. Board.*

Above is the announcement of the results of the examination of the candidates for the situations of House Officers for the City Hospital of Boston, which is about to be put in operation.

We are glad to see that the plan of "concours," or making the elections for these important offices depend chiefly and primarily upon the results of a rigid examination, has been adopted in our new Hospital, as it has been in most of our other large Hospitals throughout the country. We believe it to be better for the Hospital, as affording means to secure the best men for the places; and better for the applicants, as more likely to treat them all with true justice, while an office thus attained is looked upon as a valuable prize, and becomes another aid towards the elevation of the standard of medical education.

Coroner for Middlesex County.—We are pleased to see that Dr. Francis H. Brown, of Cambridge, has been appointed coroner for Middlesex County. We trust that this is the beginning of a change which shall extend throughout the whole commonwealth, until every district shall be represented by a medical officer as active and competent as this gentleman.

Hospital Notes and Gleanings.—*Bromide of Potassium in Epilepsy.*—Bromide of potassium is still a favorite remedy in epilepsy, and is much used at the Hospital for paralysis and epilepsy by Dr. Ramskill, Dr. Radcliffe, and Dr. Hughlings Jackson. The dose generally prescribed is about ten grains. This Dr. Radcliffe frequently gives at bedtime every night, but Dr. Ramskill and Dr. Hughlings Jackson generally give it three times a day. The dose may be increased to twenty, or even to thirty grains. There can be no question as to its very great value in diminishing the number of fits, and it is certainly by far the best remedy in this respect We have already reported cases in which it seemed to be of great benefit; but it is very doubtful whether it effects a cure. That it will keep the fits off for long periods, for months, or for a year, is quite certain; in many cases, however, the fits return when the drug is given up. We need scarcely say, that besides this specific treatment of the disease, the condition of the patient generally is carefully attended to. But any one may observe that, not unfrequently, epilepsy occurs in patients who are, except during, and for a short time after, the paroxysm, in good health. Here little else than specific treatment can be adopted. Probably, in such cases, there is some organic disease of the minute tissues of the medulla oblongata, or, as it is generally, but vaguely, expressed, the excitability of the medulla oblongata is increased. It is not likely that any drug will restore the damaged structures to their natural condition any more than it would thickened and contracted aortic valves; but it is quite certain that by treatment the fits may be kept off for very long periods. Again, and this is the next best thing to a cure, the patient's condition between the paroxysms is much improved. The bromide, it is well known, diminishes sexual appetite, and hence has been used in cases of epilepsy associated with masturbation. Its chemical congener, the iodide, has this property as well, but seems to have little or no influence on epilepsy. Again, the bromide, which is so useful in epilepsy, has, Dr. Brown-Séquard says, no influence over syphilis. This shows the truth of our remarks in reference to formiate of ammonia, that from chemical relationship we cannot indicate a therapeutical one.—*Med. News*, from *Med. Times and Gaz.*

Dr. Tanner, in "a Clinical Report on Cancer of the Female Sexual Organs," says, "In 92 cases of cancer of the uterus 80 were married, 10 were widows, 1 was single but had borne a child, 1 only was really single, and in her case the deposit was secondary. Only 12 of the whole number had never been pregnant; while the rest had each averaged 6½ pregnancies, which," as the author remarks, is above the average, and "seems to show that child bearing predisposes in some measure to cancer of the uterus."—*Lancet.*

VITAL STATISTICS OF BOSTON.
For the Week ending Saturday, April 16th, 1864.
DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	52	47	99
Ave. mortality of corresponding weeks for ten years, 1853—1863,	36.4	39.1	75.5
Average corrected to increased population - - - - -	00	00	82 95
Death of persons above 90 - - - - - - - - -	0	0	0

Married,—In Roxbury, 13th inst., Dr. Samuel Gilbert Webber, of Boston, Assist. Surg. in the Navy, to Miss Nancy P. Sturtevant, of Roxbury.

Died,—In this city, 14th inst., of paralysis, Dr. Alanson Abbe, aged 69 years. In this city, 15th inst., Dr. Selden Jennings, of Richmond, Mass.—a member of the present Legislature of this State.

Deaths in Boston for the week ending Saturday noon, April 16th, 99. Males, 52—Females, 47.—Apoplexy, 1—congestion of the brain, 2—bronchitis, 3—consumption, 15—convulsions, 1—croup, 4—cyanosis, 4—diarrhœa, 2—diphtheria, 3—dropsy, 2—dropsy of the brain, 2—drowned, 1—dysentery, 1—dyspepsia, 1—epilepsy, 1—erysipelas, 1—scarlet fever, 3—typhoid fever, 1—gangrene, 2—disease of the heart, 6—infantile disease, 2—intemperance, 1—congestion of the lungs, 4—inflammation of the lungs, 6—marasmus, 1—measles, 2—meningitis, 1—old age, 1—paralysis, 2—peritonitis, 4—rheumatism, 1—smallpox, 1—disease of the spine, 1—tonsillitis, 1—unknown, 14.

Under 5 years of age, 38—between 5 and 20 years, 5—between 20 and 40 years, 24—between 40 and 60 years, 21—above 60 years, 11. Born in the United States, 71—Ireland, 22—other places, 6.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

Vol. Lxx. Thursday, April 28, 1864. No. 13.

SOME EXPERIMENTS ON FRACTURE OF THE RADIUS:—A CASE OF RUPTURE OF THE QUADRICEPS EXTENSOR FEMORIS.

By David W. Cheever, M.D., Demonstrator of Anatomy in the Medical School of Harvard University.

[Read before the Boston Society for Medical Observation, April 18th, 1864, and communicated for the Boston Medical and Surgical Journal.]

By breaking the radius of a dead subject just above the wrist (Colles's fracture) the forearm at once falls inward on the carpus, and the end and styloid process of the ulna are displaced to the ulnar side; thus demonstrating that this particular deformity, usually observed in Colles's fracture, is not the result of muscular action, but is merely owing to the giving way of the radius, the only connecting bond between the forearm and hand—since the ulna does not enter into the articulation of the wrist. The antero-posterior displacement, usually so marked, is undoubtedly due, however, to muscular action. Abducting the hand forcibly to the ulnar side does not reduce the lateral deformity; and we venture to think that better results will be got where the arm is treated in a straight position—midway, of course, between pronation and supination—and the fingers either left free, or, if confined at all, bent over a Bond's splint. Certainly the semi-prone position will counteract to some degree the influence of the *pronator quadratus*, which draws the upper fragment towards the ulna; and it must not be forgotten that the *supinator brevis*, the natural antagonist of the *pronator radii teres*, is untouched, and still acting normally on the upper fragment; and also that the *biceps*, from its insertion into the tubercle of the radius, assists very considerably in supination. The action of the *supinator longus*, from its insertion into the lower fragment at the styloid process of the radius, is more difficult to control; but extension and reduction of the parts by direct pressure, followed by moderate pressure with pad and bandage over the belly of this broad muscle on its anterior surface, will control it nearly as well as the position of the hand in the pistol-shaped splint; while in the latter position we stretch unnaturally, and often painfully, the ligaments of the wrist, and have sometimes the result of either stiffness, or considerable loss of power in the articulation. Pads or compresses of moderate size and hardness are of course proper to keep the fragments in place. But it must be remembered that next to the danger of deformity from non-reduction, or non-apposition of the fractured bone, is the equally serious danger of stiff and immovable fingers from inflammation of the tendons. As the risk of producing effusion and callus among the flexor tendons is much increased by strong pressure, better use may be obtained—

1st, by bandaging not too tightly, after restoring the fragments into place by pressure and extension.

2d, by leaving the fingers free, and by the early use of passive motion.

We have been struck, in dispensary practice, with the fact, that neglected fractures of the radius often get better use of the fingers, though at the expense of some deformity, than those which have been tightly imprisoned in a Goodwin's splint. The true aim seems to be to apply just enough restraint to keep the parts in position, without increasing or originating inflammatory effusion among the tendons of the flexor or extensor muscles—though trouble in the former is by far the most frequent. We are aware that much of this is in accordance with the treatment laid down by Hamilton. Certainly the tendency has been to regard *all* the deformity following this fracture as caused by muscular action, and to endeavor to control the *pronator quadratus* by firm pressure with hard pads, and even to attempt to pry apart the radius and ulna by a ridge on the palmar splint. As Hamilton well says, this is the expedient of a mechanic rather than a surgeon.

Similar experiments on the dead subject also proved, that in a very oblique fracture of the radius we may get rotation of the head of the bone under the outer condyle, even though the fracture be complete. This results, probably, from the lower fragment pressing against and turning the upper with itself; while, at the same time, much displacement is prevented by the lateral apposition of the fractured surfaces. Rotation of the head of the radius, at best an obscure sign, is not, therefore, always a diagnostic mark that the bone is unbroken. Partial fracture, the separation of the inner articular surface of the radio-carpal articulation, or a stellate fracture of the same, may also exist, and confuse the diagnosis, if we rely upon rotation. We have seen two instances of these obscure injuries during the past year—where there was no deformity, no displacement, and no crepitus, but where pressure over the expanded articular extremity of the radius produced severe and constant pain—where the arm and hand were helpless, and the recovery was measured by weeks. These cases followed falls, and there was no swelling of the wrist, as in a sprain. For obvious reasons, such cases can scarcely ever be verified by an autopsy.

Rupture of the Tendon of the Quadriceps Extensor Femoris.

Mr. ——, 75 years of age, quite fleshy, fell upon some stone steps, and was unable to rise. When first seen, the left leg was flexed at the knee, and he could not extend it. The patella was in place and entire. A hollow was manifest just above the patella, about two inches in length, bounded by a firm muscular projection above. The fingers could plainly feel the articular surface of the condyles of the femur, when placed at the bottom of the depression. There was no pain, and the limb could be flexed or extended without any complaint. He was placed on his back, with the limb straight, and elevated about twenty-five degrees on a firm splint. The second day there was considerable serous effusion about the seat of injury, and a little tenderness. On the third day a blush of inflammation over the knee; no pain; tenderness the same. During a few days the effusion gradually shrunk and solidified. At the end of a week it was quite firm to the touch, and very little sensitive. There was some swelling. No pain during the whole treatment, except from irksomeness of position, or accidental pressure. The thigh was not compressed by a bandage, because it was thought that the retarding of the circulation in an old person might do more harm to the processes of repair than the partial pulling down of the retracted muscle could do good.

The process of union followed very exactly the course and results of Paget's experiments on the divided tendo achillis of rabbits. The health and constitution of the patient were excellent for his years.

At the end of a fortnight the limb was put in a starched bandage, with a ham splint, from the ankle to midway up the thigh, and laid down on the bed. At the end of three weeks he was allowed to sit up. In four weeks he used crutches freely. In six weeks he walked with a cane, and went down stairs. The bandage was gradually cut away, and entirely removed in seven weeks. In eight weeks he was in the street, and could walk without a cane, though cautioned not to do so. The swelling above the patella had settled down into a firm, insensible band, about two inches broad, and the leg could be firmly extended, and about one third flexed. The motion of the joint was free, and he was warned not to flex it suddenly.

The case is interesting on account of its comparative rarity, ruptures of other tendons and muscles being much more frequent, and also for the good result obtained by a patient so old and fleshy. There was only one bruise apparent after the injury. This was about two inches below the patella, on the fleshy mass of the anterior tibial muscle. It would seem probable that the patient fell with the leg flexed, and struck on this surface, and that the extensor muscles of the thigh, being affected with fatty degeneration, gave way at their junction with the tendon—where, Paget says, the rupture always occurs—and the patella was thus saved from fracture.

THE USE OF HEAT AND COLD APPLIED TO THE SYMPATHETIC NERVOUS SYSTEM.

[Concluded from page 234.]

THIS theory exhibits a unity of purpose among the organic forces of the body, in the presence of inflammations, that is in keeping with the perspective wisdom exhibited in all of the physiological functions. It exhibits all inflammatory processes, excepting those of a specific or malignant character, as having a direct recuperative tendency. It solves the problem of inflammation. Viewed in this light, inflammation is no longer primarily, as Cullen taught,* "a spasm of the extreme arteries supporting an increased action in the course of the same"; or, as Hunter taught,† "an increase of life, or an increased disposition to use with more violence the life which the machine or the part is in possession of"; or, as Alison‡ asserted, that it "consists essentially in a local increase of a vital property of attraction existing among the particles of the blood, and between them and the surrounding textures, and with which other vital properties are connected and simultaneously excited," but simply in an augmentation of the organic forces in the locality involved, and a proportional diminution of similar vitality in the rest of the body. Simple inflammation, then, always suggests reparation. The event to be the most dreaded in its progress is not so much a superabundance of vital force in the part affected, as the proportional diversion of the same from the rest of the body, especially from the secretory and excretory glands and organs. The secretion of a normal *quality* of nervous force is dependent in a great measure upon the completeness with which the secretory and excretory glands and organs perform their functions. If they fail to fulfil their office with a certain degree of integrity for want of a sufficient organic vitality, the blood inevitably becomes poisoned. If the *pabulum vitæ* becomes corrupted, then the nervous tissue can no longer elaborate from it a healthy secretion to operate the organic mechanism of the body, and the whole fabric rapidly goes to ruin.

In the treatment of inflammation, taking this view of the subject, three indications naturally arise,—1st, To diminish the flow of the *spiritus vitalis* to the part affected, if it be sufficient in volume to seriously impair the functions of the secretory and excretory glands and organs. 2d, To increase, if possible, the functions of those nervous centres that supply the secretory and excretory glands and organs with organic vitality. 3d, To husband, in the greatest possible degree, the organic forces, as they constitute the *vis medicatrix naturæ*, which must in all cases effect the cure if it takes place.

The first indication I fulfil by the application of the refrigerant dressing to the site of the nervous centres that distribute sympathetic and sensitive nerves to the tissue or organ that is involved in the inflammatory process; or, if possible, I isolate in its nervous connection, by such application, that portion from the rest of the body. To meet the second, I apply the hot dressing to the site of those nervous centres of the sympathetic system whose functions I would stimulate to the highest possible efficiency. To meet the third indication, I enjoin absolute rest of mind and body, in order to relieve the organic forces as much as possible of the burden of nutrition, that the greater part of their power may be expended in the processes of reparation and secretion. In the regimen as an auxiliary to rest, a dry, pure, rarefied atmosphere, with a uniformly high temperature, say 75° Fah., will tend greatly to diminish the nutritive function. Such an atmosphere contains much less oxygen, per cubic inch, than its opposite. The amount of oxygen being diminished by rarefaction to the *minimum* standard compatible with a normal maintenance of the organic functions, will diminish, of course, combustion in the tissues, and proportionally diminish the function of nutrition. Sufficient attention has not been given to this point, in my opinion, by therapeutists generally. If the function of nutrition be carried on with only a moderate activity in the tissues of the body in the presence of a formidable inflammatory action, the secretory and excretory glands and organs will almost invariably falter in their functions for want of a normal supply of nervous force to endow them with appropriate capabilities. As an auxiliary to obtain rest, opiates should be used freely if indicated.

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* "Cullen's First Lines."

† Hunter on the Blood, &c., pp. 334 and 335. London: 1793.

‡ Outlines of Pathology. Edinburgh: 1843.

Reparation of the injury that is the cause of the inflammatory action, whether it be the result of traumatic lesion or idiopathic congestion, and the maintenance of the functions of the secretory and excretory glands and organs, should absorb *all* of the organic forces of the body that can be directed to such purposes. The refrigerant and the hot dressing may be each applied, enclosed in India rubber bags or others composed of any flexible material. Such I formerly used, but latterly have laid them aside. I now apply the refrigerant dressing (ice or freezing mixtures) immediately in contact with the skin above the nervous centres that I wish to affect; and for the hot dressing I prefer napkins frequently wrung out of hot water to any other. The application of the cold dressing is at first a little disagreeable; but soon the patient not only tolerates it, but desires its application. The application of both the refrigerant and the hot dressing must be *constant* and *continued*, until the inflammatory action subsides. By a direct application of each dressing to the epidermis as advised, the effect of moisture applied to the part is superadded to that of sedatives and stimulation, which my experience has led me to regard as highly important. After proper control of the organic forces shall have been gained in the manner I propose, animal food (in the form of broths), and even stimulants, both diffusible and permanent, may be given in small quantities with the happiest results.

The new form of practice that I propose in this paper does not contain any new principle in therapeutics, but is only a modification of one of the oldest and most efficient embodied in medical science. Cold and heat have been used from time immemorial as therapeutical agents. Inflammatory processes occurring in external tissues of the body have been treated more successfully by the refrigerant and hot dressing than on any other plan. The practice that I advise differs from the old mode, only in this respect, that I apply the cold and hot dressing to the surface above the nervous centres that supply the inflamed tissue or organ with sympathetic and sensitive nerves, rather than to the diseased part itself. This principle I do not develop except in cases of inflammatory action occurring in internal tissues or organs of the body. The diseases to which I have successfully applied it are all inflammatory processes incidental to the cranial, cervical and thoracic regions, excepting those of a specific or malignant character. Inflammatory action occurring in the abdominal region, especially that involving the rectum and the urinary apparatus, may be modified by this mode of treatment, but in less degree.

The first case treated by myself on this new principle occurred in November, 1859. It was a case of double pneumonia. Arterial sedatives and alteratives had been freely used without avail. In the left lung the respiration had become bronchial, and the lower lobe of the right lung was seriously involved. The patient was delirious. I applied the refrigerant dressing (ice) to the site of the six upper dorsal ganglia of the sympathetic system, allowing it to extend backwards to the spinous processes of the vertebræ; to the site of the rest of the sympathetic ganglia in the cervical, dorsal and lumbar regions, and to corresponding portions of the spine I applied the hot dressing. The first effect that I perceived from the application was an improved respiratory action. The frequency of the pulse was soon diminished, and the patient became conscious. Under the effects of this treatment the patient rapidly recovered. The cold and hot dressing was continued upon the spinal region until expectoration was freely established. Napkins wrung out of cold water were finally substituted for the ice as a refrigerant dressing, to avoid extreme reaction. This point I always insist upon.

The good result following the treatment in this first instance, led me subsequently to employ it in certain diseases almost exclusively. Meningitis, iritis, pharyngitis, laryngitis, tonsillitis, diphtheritis, croup, pneumonia, bronchitis, pleurisy, pericarditis, and endocarditis, I have treated successfully.* In diphtheritis, I pursued for a long time the usual "tonic course" of treatment, but as nearly all my patients died under its effects, I at last substituted my new mode, with surprisingly happy results. The reason that I did not at first adopt it in diphtheritic disease, was, that I believed the disease to be of a specific or malignant character. In typhoid diseases, or in those complicated with a typhoid condition, excepting diphtheritis, I have had no experience with this treatment.

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* Numerous cases could be reported of each disease mentioned, excepting pericarditis and endocarditis, treated successfully on this new plan. In pericarditis, I have applied this new treatment to only one case, which eventuated favorably. I have at present a case of endocarditis under treatment, which promises a favorable result.

Before I proceed to give the *modus operandi* with this new mode of treatment, as I have applied it in different diseases, I will give a brief synopsis of the principal features in the anatomy of the sympathetic nervous system, for the purpose of a clearer exhibition of the principle involved.

In a general view, the sympathetic nervous system may be described as arranged in two principal divisions. The first division may be considered to include the ganglia seated on, or close to the cerebral and spinal nerves, with the filaments issuing from them; the second, to comprise the ganglia on the two main branches of the sympathetic, and on the branches in the visceral cavities. To the first belong the ophthalmic, otic and submaxillary ganglia on the divisions of the fifth nerve; and probably the ganglia on the glosso-pharyngeal and pneumogastric nerves, and on the posterior roots of the spinal nerves; for, from all these, fibres appear to originate, which in structure resemble those derived from the proper ganglia of the sympathetic, and are distributed to the same parts. To the second division belong the ganglia arranged in a continuous line along the sides of the vertebræ, with their connecting cords, which make up what have been usually called the trunks of the sympathetic nerve, and all the ganglia placed irregularly on the branches of the sympathetic distributed to the viscera. That each ganglion is an organ controlling certain functions in a definite locality within the body, is the opinion of some of our best physiologists.—(Vide Kirkes and Paget's Manual of Physiology, page 366.)

The ophthalmic ganglion distributes nerves to the globe of the eye; the otic, to the tympanum. The submaxillary ganglion supplies with nerves the side of the tongue, the submaxillary gland and Wharton's duct. The spheno-palatine or Meckel's ganglia supply with their nerves of distribution the mucous surface lining the nasal passages; and partially the mucous surface lining the passages within the cervical region. The ganglia seated upon the fifth and upon the glosso-pharyngeal and pneumo-gastric nerves, together with the carotid plexuses and their derivations, supply the meninges of the brain and that viscus itself. From the cervical ganglia, cords of communication descend to the superficial and deep cardiac plexuses. The six upper dorsal ganglia distribute nerves to the aorta, œsophagus and lungs. From the sixth, seventh, eighth, ninth and tenth thoracic ganglia, the great splanchnic nerves originate, which terminate in the semi-lunar ganglia. The last thoracic ganglia, through the third splanchnic nerves, and in common with the renal plexuses, distribute nerves to the kidneys. The lower lumber ganglia, in common with the termination of the aortic plexuses, forming the hypogastric plexuses, distribute nerves to the pelvic viscera. The ganglion impar of the coccyx distributes nerves to the rectum. The superficial and deep cardiac plexuses, together with the ganglionic tissue found in its own substance, distribute nerves to the heart.

From the ganglia seated upon the posterior roots of the spinal nerves, and from the great sympathetic trunks upon each side of the spine, those nerves probably arise that control the organic functions in the cutaneous system and muscular tissue of the striated variety. Upon reference to the minute anatomy of the parts (Vide Kölliker, CXIV. and XV., 1844–5; Volkmann, CXXVI.; Todd and Bowman, XXXIX.), it will be seen that quite a proportion of the nerves that arise from the spinal ganglia pass into the posterior roots of the spinal nerves and are distributed with them. Of the fibres derived from the great sympathetic trunks, some go direct to the viscera, the rest pass through the branches of communication that connect them with the anterior branches of the spinal nerves, and joining those spinal nerves, proceed with them to their respective seats of distribution. The spinal nerves supply the muscles of the striated variety, which are found in a considerable proportion near the periphery of the body in close proximity to the cutaneous system. Hence, those nerves of the sympathetic system that join the cerebro-spinal nerves, that supply the voluntary muscles, would naturally and probably be the ones that would supply those muscles and the tissues excentric to them.

In meningitis, iritis, pharyngitis, laryngitis, tonsillitis and diphtheritis, and in cases which exhibit an apoplectic tendency, I apply the refrigerant dressing to the site of the superior cervical ganglia[*] of the sympathetic nervous system, allowing it to extend backwards to the spinous processes of the vertebræ, that the sedative effect resulting therefrom may be experienced by that portion of the sympathetic system seated upon the posterior roots of the spinal nerves. In either of these diseases, when the inflammatory action is excessive, I allow the refrigerant dressing to extend downwards so as to cover over the site of the middle cervical ganglia and corresponding portions of the spinal ganglia of the same system. At the same time, I apply the hot dressing, by means of napkins wrung out of hot water, to the site of all the ganglia of the sympathetic system in the dorsal, lumbar and sacral regions. In an adult I usually apply the hot dressing, about four inches in width, to the surface on either side of the spinous processes of the vertebræ. In pseudo-membranous croup, I apply the refrigerant dressing to the three ganglia of the cervical region, and to the corresponding spinal ganglia of the sympathetic system; and the hot dressing the same as advised in meningitis. In pneumonia, bronchitis and pleurisy, I apply the refrigerant dressing to the site of the six upper dorsal ganglia of the sympathetic, and the corresponding spinal ganglia of the same system; and the hot dressing to the site of the cervical ganglia, the site of the six lower dorsal ganglia, the site of the lumbar and sacral ganglia, and to the corresponding spinal ganglia of the same system. In pericarditis and endocarditis, I apply the refrigerant dressing to the three cervical ganglia of the sympathetic, and to the sixth, seventh and eighth dorsal ganglia; and the hot dressing to the site of all the other sympathetic ganglia in the spinal region. In the last-named diseases the sedative impression seems to be transmitted to the superficial and deep cardiac plexuses, through the superior, middle and inferior cardiac nerves, and through the great splanchnic nerves. In inflammation of the kidneys I apply the refrigerant dressing to the site of the last thoracic ganglia of the sympathetic, and at the same time I apply the hot dressing to the site of all the ganglionic centres above, in the spinal region, belonging to the same system. In inflammatory conditions affecting one or more of the pelvic viscera, excepting the rectum, I apply the refrigerant dressing to the site of the lumbar ganglia of the sympathetic; and the hot dressing to the site of all the ganglionic centres above in the spinal region, belonging to the same system. In inflammation of the rectum, I apply the refrigerant dressing to the site of the ganglion impar of the sympathetic; and the hot dressing to the site of all the ganglionic centres above, in the spinal region, belonging to the same system. In exanthematous diseases, and in other morbid conditions where a general stimulant effect is desired, I apply the hot dressing to the site of all the ganglionic centres of the sympathetic system. Any organ in the body may be stimulated in its organic functions by the application of the hot dressing to the site of those ganglionic centres that supply it with sympathetic nerves. The effect of stimulation may also be produced by the frequent application and withdrawal of the refrigerant dressing to the site of the nervous centres by which the organ is supplied with sympathetic nerves.

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[*] The much talked of experiment of Bernard, in which he found that on extirpating a ganglion of the sympathetic nerve, or dividing the filaments proceeding thence, the organic action in the part supplied with nerves by the ganglion or divided filaments was heightened; and that on applying galvanic stimulus to the divided nerve, the increased action subsided; and that by dividing the nerves connecting the part with the cerebro-spinal system an exactly opposite effect took place, led me to try the effect of the refrigerant dressing applied to the spine alone, accompanied with the hot dressing applied to corresponding portions of the sympathetic system. The result of the trial (I applied it in four cases of thoracic inflammation) was a failure. The same cases, when treated with the refrigerant and hot dressing as I advise, recovered immediately.

This determines conclusively that the reactionary effect following, is greater, or at least equal to the primary sedative effect, unless the sedative agent be gradually diminished in force as it is withdrawn, which will prevent it from taking place; and it also indicates that an increase of the inflammatory action will ensue, if in the presence of acute inflammation in any organ the refrigerant dressing is applied as advised, and then removed abruptly before it has subsided.

In cases where the inflammatory action is slight, dry cupping, or the application of counter-irritation over the ganglionic centres of the sympathetic, I have found beneficial. Where diaphoresis is desired, and where a general stimulant impression on the cutaneous system is indicated as the best means of obtaining it, the hot dressing applied to the site of all the ganglionic centres of the sympathetic in the spinal region, will be found to answer an admirable purpose.

With this mode of treatment—to produce a general alterative effect—I use the muriate of ammonia in place of the mercurial. Opiates I use freely, when indicated. A dry, pure atmosphere, of a uniformly high temperature, say 75° Fah., is in all cases to be desired. When the inflammatory action is purely cranial or cranio-cervical, and is accompanied with debility of the motor nerves of the cerebro-spinal system, I invariably use preparations of nux vomica with advantage.

What I have written comprises an epitome of my experience in this new mode of treating disease, which I believe will prove, if properly developed, to be an auxiliary to those means already adopted, by which medical science alleviates pain and prolongs human life.

Bridport, Vt., March 20th, 1864.

SPOTTED FEVER.

[Communicated for the Boston Medical and Surgical Journal.]

In Dr. Cornell's letter (Journal of April 14th) he says:—"All agree that it [spotted fever] is a malignant disease of the blood." Dr. Cornell himself evidently thinks it is "malignant typhus fever, modified." Dr. Darrach comprises his *treatment* in "three remedies—venesection, brandy, and quinine." In one case, he says, "the patient revived, after he was considered moribund, by being bled." Dr. Condie "would as soon think of cutting off the patient's head as of bleeding, and did not find venous congestion in any case."

It is hardly to be supposed there should be such discrepancy in the views of intelligent observers of the *same* disease. That cerebro-spinal meningitis may occur under decided and various modifications is very probable. But should we not look for some specific or pathognomonic symptom which might identify the so-called spotted fever? I have seen but one case, and even that I did not feel quite sure of; but from the notices I have seen of the epidemic in question, I conclude my little patient's disease was probably the same. In her case, opisthotonos was a strongly-marked feature. Though the skin, in her case, exhibited no *spots,* and in the first stages was apparently normal in color and *feel,* yet in the latter stages it was *dingy* and *doughy.* In the reported cases I have read, I think a large proportion of them contained more or less allusion to tenderness of the cervical portion of the spine, or to spasmodic curvature. Many of the cases certainly answered favorably to malignant typhus.

In regard to treatment, if I might safely judge from the single case I have seen and treated, I should say the very moderate use of alterants—I may as well out with it and say *calomel*—with diaphoretics, mainly Dover's powder, and rubefacients, constitute the best treatment—being very far from intending to intimate that I suppose this, or any other method of treatment, would have been successful in many of the cases reported as spotted fever.

Dr. Knox, of Burlington, informs me that he has made a *post mortem* in one case only—but in this he found exudation, of some consistence, adherent on the external surface of the pia mater, where it falls into the folds of the cerebellum.

Does not this suggest the inquiry—what *may be* the relations of diphtheria to cerebro-spinal meningitis; the former epidemic involving *mucous* tissue, and the latter affecting *serous* tissue, and following so closely? *Post-mortem* examination is the only source from which we may expect much light on these important inquiries.

St. Albans, Vt., April 21*st*, 1864. J. L. CHANDLER.

P. S.—I have been informed of two or three recent fatal cases, among children, in this vicinity, where the lungs seemed to be the principal laboring organs, but complicated with unusual symptoms of *cerebral* lesion. J. L. C.

OUT-PATIENTS TREATED AT THE MASSACHUSETTS GEN. HOSPITAL DURING THE YEAR 1863.

AMERICANS,	2008	FOREIGNERS,	3206——5214
Male adults,	1303	Female adults,	2210
" minors,	886	" minors,	815——5214

MEDICAL PATIENTS, 3774.

Diseases.

Abscess,	14	Caries,	5
Albuminuria,	16	Catamenia, scanty,	56
Alcoholismus,	1	" irregular,	24
Amenorrhœa,	99	Catarrh, nasal,	20
Anorexia,	132	" pharyngeal,	34
Asthma,	16	" of vulva,	1
Ascarides,	9	Chorea,	12
Anæmia,	28	Cicatrix,	2
Abortion, effects of,	1	Cholera infantum,	20
Blenorrhœa,	3	Constipation,	70
Burn,	1	Consumption,	214
Brain, organic disease of,	2	Contusions,	9
Bronchitis, acute,	365	Contracted hand,	1
" chronic,	207	" finger,	1
Bladder, irritable,	4	Corneitis,	1
Bursa, inflamed,	1	Chilblains,	1
Bowels, irregular,	2	Conjunctivitis,	2

Deafness,	7
Debility,	257
Delirium tremens,	1
Diarrhœa, acute,	105
“ chronic,	12
Dogbite,	1
Dropsy,	26
Diabetes,	1
Diphtheria,	3
Disease, imaginary,	2
Dysentery,	9
Dysmenorrhœa,	8
Dyspepsia,	266
Dysphagia,	1
Dyspnœa,	6
Dysuria,	14
Effects of tobacco,	1
“ sunstroke,	1
Empyema,	2
Eneuresis,	1
Epilepsy,	30
Epistaxis,	3
Felon,	1
Fever, irritative,	2
“ simple,	5
“ intermittent,	9
“ typhoid,	1
Fistula ani,	1
Flatulence,	21
Fœtid breath,	4
Foreign body in lungs,	1
“ “ nose,	1
Gangrene of lungs,	1
Glands, enlarged,	1
Gleet,	1
Goitre,	3
Gonorrhœa,	6
Gravel,	1
Hay asthma,	1
Headache,	118
Heart, disease of,	19
Hæmoptysis,	22
Hæmorrhage, uterine,	4
Hæmorrhoids,	15
Hernia,	7
Hip disease,	3
Hoarseness,	4
Hydrocele,	7
Hydrocephalus,	1
Hysteria,	1
Inability to speak,	1
Inflamed glands,	2
“ knee,	1
Insanity,	2
Jaundice,	8
Kidneys, disease of,	1
Laryngitis,	10
Lead disease,	3
Leucorrhœa,	69
Liver, disordered,	9
“ enlarged,	1
Local pain, not otherwise specified,	227
Local disease “ “	29
“ inflammation, “	62
Marasmus,	3
Menorrhagia,	43
Mental deficiency,	1
Nævus,	1
Nephritis,	1
Nervous symptoms,	12
Nausea,	23
Neuralgia,	78
Obesity,	1
Œdema, local,	1
Ophthalmia,	1
Orchitis,	2
Otorrhœa,	3
Ozœna,	8
Palpitation,	66
Paralysis,	24
“ facial,	1
Pleurisy, acute,	10
“ chronic,	7
Pregnancy,	16
Pertussis,	11
Polypus uteri,	1
Prolapsus ani,	2
“ uteri,	3
“ vaginæ,	1
Pleurodynia,	2
Pneumonia,	1
Rickets,	1
Rheumatic gout,	2
Rheumatism, acute,	1
“ chronic,	51
“ subacute,	43
Sciatica,	1
Scrofula,	8
Skin, disease of,	332
Sore throat,	25
Spine, disease of,	5
Stiff neck,	2
Stammering,	1
Spermatorrhœa,	8
Stomatitis,	12

Sprain,	3	Ulcer of leg,	1
Syphilis, primary,	9	" chronic,	2
" secondary,	35	" varicose,	1
" hereditary,	2	Urine, incontinence of,	4
Tænia,	2	Uterus, anteflexion of,	3
Teething,	3	" displacement of,	1
Testis, swelled,	1	" retroversion of,	1
Tinnitus,	1	Uvula, elongated,	3
Tonsillitis,	6	Vaginitis,	2
Tonsils, enlarged,	4	Varicose veins,	3
Tumor of epigastrium,	1	Vertigo,	32
" " neck,	1	Vomiting,	9
" " abdomen,	1	Whooping cough,	2
" " ribs,	1	Wound of hand,	2
" external,	1	Wry neck,	1
Ulcer of ankle,	1	Not recorded,	2
" throat,	1		
" toes,	1		3774

SURGICAL PATIENTS, 1440.

Diseases, Injuries, &c.

Abscess,	104	Disease of finger,	50
Amputation,	4	" " foot,	33
Anchylosis,	1	" " glands,	3
Balanitis,	1	" " groin,	3
Bite,	6	" " hand,	43
Bruise,	38	" " head,	14
Burns,	9	" " heart,	1
Bursa,	1	" " hip,	60
Cancer,	6	" " jaw,	7
Carbuncle,	8	" " knee,	42
Caries,	1	" " leg,	36
Cicatrix,	2	" " lip,	14
Cleft palate,	1	" " mouth,	10
Convulsions,	1	" " nail,	3
Cyst,	4	" " neck,	33
Cystitis,	10	" " nipple,	1
Debility,	1	" " nose,	16
Dislocations,	8	" " œsophagus,	1
Disease of ankle,	25	" " prepuce,	2
" " anus,	7	" " prostate,	1
" " arm,	34	" " rectum,	4
" " axilla,	2	" " scalp,	5
" " back,	9	" " scrotum,	1
" " breast,	9	" " shoulder,	20
" " cheek,	2	" " side,	8
" " chest,	3	" " skin,	42
" " clavicle,	1	" " spine,	30
" " ear,	24	" " tendon,	5
" " elbow,	8	" " testis,	3
" " eye,	26	" " thigh,	1
" " eyelid,	1	" " throat,	19
" " face,	5	" " toe,	12

Disease of tongue,	4	Orchitis,	3
" " uterus,	3	Ozœna,	1
" " uvula,	2	Paralysis,	10
" " wrist,	15	Periostitis,	3
Epididymitis,	2	Phymosis,	2
Epulis,	1	Polypus,	2
Felon,	63	Rachitis,	6
Fistula,	3	Rheumatism,	2
Fracture,	44	Scrofula,	48
Frostbite,	1	Sciatica,	1
Ganglion,	1	Sprain,	13
Goitre,	1	Stricture,	3
Gonorrhœa,	15	Synovitis,	3
Gout,	1	Syphilis,	33
Hæmaturia,	1	Talipes,	2
Hæmorrhoids,	6	Tonsillitis,	12
Hernia,	18	Torticollis,	1
Hydrocele,	12	Tumors,	32
Injuries,	4	Ulcers,	88
Iritis,	1	Varicose veins,	13
Lupus,	1	Wart,	1
Necrosis,	16	Wen,	6
Neuralgia,	4	Wounds,	28
Nævus,	4	" gunshot,	5
Odontalgia,	7		
Œdema,	4		1440

S. L. Abbot, M.D., *Physician to Out-patients.*

ON THE VOMITING OF PREGNANCY.

By Professor Gustav Braun, Vienna.

During pregnancy various disorders connected with the stomach manifest themselves, which may affect either its sensations or its functions. The anomalies of sensation manifest themselves as mere repugnance to ordinary articles of food, especially of what was previously preferred, sometimes by longings after unsavory or innutritious substances. These manifestations, depending upon abnormal innervation of the vagus, are of no importance. It is different in regard to actual derangements of function, which show themselves in the form of loss of appetite, pressure in the gastric region, spasms of the œsophagus, retching and vomiting. Vomiting is sometimes one of the most obstinate and important manifestations of pregnancy, as it may impair the health of those suffering from it, or may cause an interruption to the course of the pregnancy.

The emesis consists sometimes in mere retching or in actual vomiting; and these manifestations may reach a high degree and recur frequently without causing any real mischief. We are often amazed to see women, who throughout the whole course of their pregnancy, every time they have eaten anything, are attacked sometimes earlier, sometimes later, with painful retching and vomiting, not only by day but by night, and yet do not suffer much in their general health. In some cases the vomiting is preceded neither by pain nor feeling of pressure in the precordia; in others the uneasiness in the gastric region is permanent, the mouth becomes dry, the skin hot, the pulse frequent, and emaciation follows. Not unfrequently derangements of the cerebral functions show themselves, sometimes in the form of hallucinations, sometimes of violent headache, and occasionally a comatose condition supervenes, which is in the highest degree dangerous to life.

In the earliest period of pregnancy vomiting is pretty frequent, and some women suffer from it immediately after conception; whilst in many women no vomiting occurs during the whole course of pregnancy. If the vomiting sets in immediately after conception it may continue during the whole of pregnancy till delivery has actually taken place. Vomiting usually ceases on the expulsion of the child, and no longer annoys women who have been delivered. In some cases, though these are of rarer occurrence, the vomiting appears in the last three months of pregnancy, and may determine very unfortunate consequences. The vomiting which occurs during labor depends upon repletion of the stomach, a peculiar severity of the pains, and though the manifestations it occasions are painful, they are not dangerous.

Very different causes have been assigned for this vomiting, often obstinate and incapable of being arrested; thus Bretonneau ascribed it to a spasmodic rigidity of the womb which did not admit of the dilation necessitated by the increasing volume of the fœtus; Negrier thought it was the result of an inflammatory irritation of the cervix sympathetically affecting the stomach. Kiwisch sought the cause of the vomiting in an unusual susceptibility of the nerves of the stomach, and considered that it was in close connection with the chlorotic condition of the blood which is frequent in pregnant women. Frierichs directed attention to the coincidence of vomiting with albuminuria and uræmia. Clay has referred to an inflammatory condition of the cervix and os uteri as the cause of vomiting; while René Briau thinks it is due to retroversion of the uterus in the third month of pregnancy. Hohl succeeded in one case in discovering the cause of violent vomiting to be retroversion of the uterus at the fourth month of pregnancy.

The vomiting which appears late in pregnancy, especially during the ninth lunar month, is usually the result of the pressure which the uterus exerts on the liver or stomach, and it commonly disappears when the uterus sinks.

Virchow has directed attention to the circumstance that in pregnant women who endeavor to preserve a slender figure by the use of stays the portion of the liver lying below the line of application of the pressure is compressed between it and the ascending uterus, so that the gall-bladder may be compressed, and by the tension of the bile ducts an intense jaundice be produced.

The vomiting of pregnant women may be associated with or mistaken for the most various diseases of the chylopoietic viscera, as with acute or chronic gastric catarrh, with a perforating gastric ulcer, carcinoma of the stomach, or perityphlitis.

Acute gastric catarrh is distinguished from the vomiting of pregnancy by its longer duration, and the disinclination for food; and chronic gastric catarrh is distinguished by the character of the matter vomited, which mostly contains clots of blood. Perforating ulcer of the stomach is characterized by its almost invariably slow development, by the gastric pain and bloody vomiting. Cancer of the stomach can only be diagnosed with certainty when a hard swelling connected with the stomach can be clearly made out, and when it can be distinguished from swellings of neighboring organs, accumulations of fæces in the transverse colon, tumors of the liver or of the omentum. The circumscribed, irregular, movable or immovable tumor which cancer gives rise to is almost without exception painful on pressure and even without it, and frequently there dart from it burning lancinating pains which extend to the back. The vomiting which occurs spontaneously or after meals consists at first of watery or slimy matters; later in the disease it resembles coffee grounds or chocolate, appearances which sufficiently distinguish it from the matters vomited by pregnant women. In perityphlitis there is a roundish, uniformly hard swelling, tender on pressure, which at first lies deep in the right iliac fossa; during inspiration and expiration the abdominal parietes move over it. If the cœcum is empty it is often necessary to press the abdominal wall deeply in, in order to recognize the swelling, and the percussion note is clear over it as the cœcum containing air lies in front of it. It is only in cases where the swelling reaches the anterior abdominal walls that a certain diagnosis is possible, and that this cause of obstinate vomiting can be recognized.

Difficult as it often is, in the case of those suffering from gastric symptoms, to determine whether these depend upon organic lesions, or are merely sympathetic phenomena, we are yet justified in ascribing them to the former, when they have existed for some time before the beginning of pregnancy; when the appearance of the tongue deviates considerably from its normal characters; when there is fixed pain, increased on pressure, in the precordia; when emaciation is progressive, or constant fever sets in. Even suppose we are so fortunate as to be able to make a certain diagnosis, little is often gained, as the treatment is only too often without result. Especially the sympathetic symptoms induced by pregnancy often present the most obstinate resistance and defy the resources of art. A cure not unfrequently takes place on the spontaneous occurrence of abortion; and cases have been published in which death of the fœtus without its simultaneous expulsion has been observed, and where symptoms which had previously resisted all treatment immediately disappeared. In some cases death has taken place in spite of the occurrence of abortion; Moreau has observed three cases with a fatal termination.

The treatment of the vomiting of pregnancy is not always crowned with satisfactory results, as indeed the long list of the most various remedies recommended sufficiently proves. The heightened sensitiveness of the stomach renders necessary easily digestible food, such as cold roast poultry, venison, and underdone beef. Good results are generally obtained from the use of seltzer and other aërated waters, and mild or even drastic purgatives; but the best effect is to be expected from bitter, tonic, antispasmodic remedies. Among these may be mentioned calamus, tincture of ipecacuanha, orange flower water, and assafœtida. Among drinks may be mentioned good old wines, champagne and coffee. Less favorable results are to be expected from opium, morphia, and castoreum. Hohl recommends, when the vomiting depends upon increased secretion of bile, and this is not occasioned by pressure on the liver, the use of bicarbonate of soda and tincture of nux vomica. Where there is inflammatory irritation of the cervix, Negrier thinks good is done by the application of leeches to the vaginal portion; and Bretonneau endeavored to overcome spasmodic rigidity of the uterus by the application of belladonna ointment. Moriceau thought benefit was derived from the application of a large derivatory to the region of the stomach. Simpson speedily cured a severe case by inhalation of opium. Krause recommends that some lukewarm gruel or very weak green tea should be always kept in readiness, and that some cups of it should be taken quickly in order to provide material for the speedy evacuation of the stomach; he also found creosote combined with steel act very efficaciously.

Ferrand had a satisfactory result in a case of obstinate vomiting, where he employed moxas, and in another where he applied Vienna paste; in the second case, however, chloroform and iodine were also employed. In cases of the kind under consideration, Corvisart, Baudot, Gentles and others recommend pepsine. They give ten grains of it once a day, or a teaspoonful of the liquor pepticus thrice daily, immediately before meals. Henoch recommends, when vomiting during pregnancy is very obstinate, the use of creosote. In three cases where other means had proved useless, he obtained a cure by means of it; in one case the vomiting ceased after the first dose, in another it was not checked for a month.

From the fear that from the continual vomiting a fatal result might occur, it has been proposed that abortion or premature labor should be artificially induced. Opinions are not unanimous as to the propriety of this proceeding. Cazeaux is opposed to it, because no special time can be fixed when the abortion should be brought about. Villeneuve is in favor of the induction of abortion when the life of the mother or child is seriously endangered. Busch considers abortion admissible in none but extreme cases. Hohl objects to the induction of abortion, because the most severe cases of vomiting very seldom end fatally. Churchill and Lee have by this means obtained very satisfactory results. C. Braun trusts to the expectant method, and recommends abortion only in cases where the life of the mother is seriously endangered.

In the few cases where vomiting depends upon retroversion of the pregnant uterus, it may, though having previously resisted all treatment, be speedily and permanently cured by replacing the womb in its normal position.—*Edinburgh Medical Journal.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, APRIL 28, 1864.

THE FEE-TABLE.—We would again call the attention of our city readers to the necessity of the change in the fee-table we urged at the beginning of the year. If any one doubted the expediency of such action then, we feel sure that he will recognize its importance at the present time, when the necessaries of life are increasing so astonishingly in value. If there was any reason for raising the scale of prices in 1852 on the ground then stated by the committee, "that since the last fee-table was adopted, the expenses and style of living have increased very much," there can scarcely be but one opinion with regard to the subject in 1864. The scale then adopted as adequate to the support and dignity of the profession certainly falls far short of representing that standard to-day, and fortunately at no time would the desired change be so little felt or objected to by the community as at present, when all classes of patients are not only demanding and obtaining more for their own services and labors, but are daily accustoming themselves to pay more for the use of those of others. We have always been far too modest in our own estimate of the value of our services, and, in order to obtain anything like the competency which follows a successful career in the law, have been obliged to do at least twice the amount of work. Hence the necessity of continuing active practice far into old age, and the non-attainment of that leisure for study and the record of experience, so essential to the future rank of medicine in this country. We may place what value we please upon our labor, and certainly unless the profession considers its own services as worthy of high reward as those of any other, it can hardly expect the public to recognize their importance.

The annual meeting of the Boston Medical Association will be held next week, and a fitting opportunity will then occur for a full discussion of this matter. We have heard but one opinion from all with whom we have spoken on the subject, and some, who at first thought sufficient latitude was allowed under the present table, are now convinced of the necessity of its revision, so far at least as relates to the ordinary daily visit. It will not be necessary to repeat here what we have so lately expressed in relation to this point, nor do we care to suggest any specific action. We trust that there will be a full attendance at the meeting, and that whatever course is adopted may be considered binding upon every member of the Association.

Our readers may be struck, perhaps, with the similarity in the new method of treating disease advised by Dr. Blanchard in the interesting article concluded in the present number, and that of Dr. Chapman, reprinted from the *Medical Times and Gazette* in our issue of March 17th. The result of their investigations, carried on independently of each other, should commend them to the attention of all who believe in progressive medicine. Dr. Blanchard, in a letter to the Editors, says :—" Dr. Chapman's mode of treatment differs from mine in that he applies the cold dressing to the spine and the hot dressing to the sympathetic centres. This I have tried in inflammatory (active) diseases and it has failed me. Yet it would be in keeping with the theory I propose, to have the effect produced upon the motor portion of the cerebro-spinal system by the appliances of heat and cold as he describes. I have never applied my principle of treatment to nervous diseases, or even to those of a chronic character. In this method of treatment I am quite certain the *priority* belongs to me. Yet, after all, I am glad of Dr. Chapman's announcement; it will do something towards corroborating mine. We are all brothers, or should be, with one duty, one inheritance, and one glory."

At the annual meeting of the Middlesex South District Medical Society, held on the 20th inst., at Waltham, the following officers were elected for the ensuing year :—*President,* Theodore Kittredge, M.D., of Waltham. *Vice President,* Enos Hoyt, M.D., of Framingham. *Secretary,* Francis H. Brown, M.D., of Cambridge. *Treasurer,* F. R. C. Kittredge, M.D., of Waltham. *Supervisors,* Drs. J. L. Sullivan, Jefferson Pratt, Anson Hooker. *Censors,* Drs. M. Wyman, H. H. Pillsbury, Alfred Hosmer. *Commissioner on Trials,* W. W. Wellington, M.D. *Councillors,* Drs. C. H. Allen, Enos Hoyt, J. B. Taylor, A. Mason, Henry Cowles, A. B. Bancroft, A. C. Livermore, Howland Holmes, L. B. Morse, Anson Hooker, R. S. Warren.

Francis H. Brown, *Secretary.*

The following extract is from the London *Reader,* a journal which contains the very latest scientific news from all parts of the world, and which embraces among its contributors the most celebrated literary and scientific men in England. The honorable course it has pursued towards our country in its criticisms is exceptional and highly gratifying.

" At a meeting of the Anthropological Society, March 1, the following paper, on 'The Origin of Human Races, and the Antiquity of Man, deduced from the Theory of Natural Selection,' was read by Alfred R. Wallace, F.L.S. After illustrating the mode of action of Natural Selection in the animal world, it was shown that its efficiency depended entirely on the isolation and self-dependence of animals. A wounded or sick animal died, because its fellows neither brought it food nor protected it against its enemies. In man this was different. In even the lowest races sympathetic feelings existed ; the sick were at least fed and protected. Again, animals must perform *all* the acts necessary for their safety and preservation. A deficiency in any one generally led to destruction. In man, on the contrary, there was division of labor ; the less swift, the less strong, the less gifted with sight or hearing, did not die, but were useful for some inferior occupations. So man, not using natural, but artificial weapons, could make skill a substitute for strength and agility. These causes combined, removed man from the action of ' Natural Selection ' as regarded his bodily form, and transferred its action to his mind. Intellectual faculties, social and sympathetic feelings, sense of right and justice, diminution of the combative and destructive faculties, would all add to man's well-being. The communities, therefore, in which they predominated would increase, and would tide over dangers and difficulties that would lead to the extinction of inferior races. It was agreed, therefore, that from this epoch man's physical form would be unchanged, except as regards very trifling and accidental variations, and that we must conclude that the greater differences of race we now see originated in that early epoch when his mind was not sufficiently advanced to remove the action of ' natural selection ' from his body. This harmonizes the conflicting views of anthropologists by showing why races have been so long unchanged and apparently unchangeable, and still renders it possible that, at a still earlier period, all might have sprung from a common stock. The bearing of these views on the antiquity and dignity of man was then adverted to, and, in conclusion, it was shown what bright prospects they held out for the future of the human race."

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, April 23d, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	52	40	92
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.7	37.9	79.6
Average corrected to increased population - - - - -	00	00	87.49
Death of persons above 90 - - - - - - - -	0	0	0

Pamphlets Received.—Address delivered before the Alumni Association of the College of Physicians and Surgeons, New York, at the Spring Commencement, March 10, 1864. By J. Mauran, A.M., M.D., &c., Providence, R. I.—Twenty-ninth Annual Report of the Board of Trustees and Officers of the Central Ohio Lunatic Asylum, for the year 1863.—The Army Ration—How to diminish its Weight and Bulk, &c. By E. N. Horsford, late Rumford Professor in Harvard University.

Deaths in Boston for the week ending Saturday noon, April 23d, 92. Males, 52—Females, 40.—Accident, 1—anæmia, 1—apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 3—bronchitis, 1—cancer, 2—consumption, 14—convulsions, 3—croup, 6—cystitis, 1—debility, 1—diabetes mellitus, 1—diarrhœa, 1—diphtheria, 4—dropsy, 5—dropsy of the brain, 2—epilepsy, 2—scarlet fever, 3—typhoid fever, 1—gastritis, 1—disease of the heart, 2—intemperance, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 4—marasmus, 2—necrosis of foot, 1—œdema of glottis, 1—old age, 2—ophthalmia, 1—phlegmon, 1—pleurisy, 1—premature birth, 1—puerperal disease, 1—scalded, 1—scrofula, 1—smallpox, 5—tumor, 1—unknown, 6.

Under 5 years of age, 33—between 5 and 20 years, 12—between 20 and 40 years, 21—between 40 and 60 years, 17—above 60 years, 9. Born in the United States, 62—Ireland, 20—other places, 10.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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THE ARMY AS A SCHOOL FOR THE PHYSICIAN AND SURGEON.

By Edward A. Whiston, M.D., Surgeon 1st Mass. Vols.

[Read before the Medical Society of the 2d Division, 3d Corps, Army of the Potomac, April 12th, 1864, and communicated for the Boston Medical and Surgical Journal.]

The question has often presented itself to me, as it doubtless has to all the members of this Society during their connection with the Army, What kind of influence is a military experience exerting upon us as physicians? In our profession, as in every other walk of life, there is no such thing as remaining stationary. The physician does not pass through life upon "flowery beds of ease," any more than the rest of mankind. The strife in which we engaged when we started upon a professional life, is no more carried on at the same stand-point than the engagements with the rebels which we have witnessed. We must either advance or fall back. Fortunate will it be if we come to the conclusion, as we progress with this subject, that we have not emulated the Army of the Potomac in the latter manœuvre. Of course, the influence which has been produced upon us by our military experience is not precisely similar on any two of us. If we should compare thoughts on the subject, we should not exactly agree. I intend simply to give a few ideas which have occurred to my mind, as I have thought of the matter from time to time.

To the fathers among us, represented here by our worthy President, who are "rooted and grounded in the faith," a detour of three years from the road they have been travelling a score or more, appears so slight a matter, that "when this cruel war is over" they can easily return to the old familiar ways, and walk therein as though they had never left them. The principles of the profession, and the ideas they have gained in the practice of it, have become a part of themselves never to be forgotten. But to those of us who had just begun to walk the rugged road of a professional life, this digression will remove us for so long a time from the things that were just beginning to look familiar, that we shall have to learn over again many of the steps we had already taken.

As a school for the man who intends to devote himself to operative surgery, the Army is, in my opinion, unequalled. The necessity for rapidity of action, at a time when men with wounds of every form and degree of severity are being brought from the battle-field by scores, requires the exercise of a quick judgment, confidence in one's own ability, and dextrous manipulation. These qualities, when brought into requisition so frequently, are of necessity constantly improved, and the field hospital is thus rendered preëminently the place for perfecting the operative surgeon. But this general statement requires some qualification; for while sound judgment, confidence and skill are equally necessary for the surgeon in civil life and in the army, the battle-field, from the character of the lesions witnessed there, more particularly fits him for a *military* surgeon. Amputation and excision for gun-shot injuries form nearly the sum total of his experience. Most of the splendid special operations of civil life, which we felt ourselves pretty well posted in, theoretically, during our course of study, we are gradually forgetting.

These remarks, of course, bear simply upon those who have left the civil pursuits of the profession, and come out for three years active service in the field. The regular army medical officer, who at times has charge of large hospitals, has the opportunity and means to perform as great a variety of operations as any surgeon in civil life.

Most of us, however, did not study medicine for the sole purpose of fitting ourselves to hold a knife in our hand and cut away at some unfortunate fellow-being. The number of surgical operations is comparatively so small in time of peace, that there is necessity for but a limited number of operators. Therefore the wants of society, as well as our own tastes, pointed out to us the quiet round of duties of the practitioner of medicine. Fortunate it is for humanity, that so many noble men *have* directed their studies more particularly towards the science and art of surgery, and that the records of the present generation show no lack of men highly skilled in the performance of operations.

Now having disposed of the older members of the profession, who, we take it for granted, are not injured in a professional point of view by an army experience—and of the regular army medical officer, who has devoted himself particularly to the practice of military medicine and surgery—what can we say of the effect of his three years' service in the army, upon the young practitioner? I will give you, in the first place, my opinion, and then my reasons for it. This opinion, perhaps, it would not be proper to state, except in a circle of medical officers.

I cannot but think, from my own experience, and from conversation with others, that the influence of a military life upon the young physician is, in the main, decidedly bad. And I believe this to be the honest opinion of nearly every medical officer with whom I have talked upon the subject. I qualified my opinion by saying "in the main." Now let us see what advantages there are, before studying the disadvantages.

One of the greatest benefits, it appears to me, is, that it gives the young man confidence. He is called upon to practise amongst a set of rough men, where he is not obliged to cater to the delicate sensibilities which would pervade a home circle and make most young men somewhat timid at first, in regard to their ability to please. Soon, the machinery of his department gets to working smoothly, and he finds there is nobody to interfere or complain, if he does his duty. And in a very short time, by constant communication with so many sick, he acquires a confidence which he might not gain at home in the course of years.

Another advantage is, that he gains a practical knowledge of gunshot wounds, and a dexterity in amputating, which he would not get at home, and which at some time may be of vast advantage to him in civil life.

While we acknowledge, however, these and perhaps other acquisitions to be of great service to him, are they not counterbalanced greatly by the disadvantages? These may be summed up in one—viz., the gradual falling back in the general knowledge of his profession. To what is this due? As much to the habits of life which a person contracts in the army, as to anything else. All regularity of habits is entirely broken in upon. Having so little to do, we get prodigiously lazy; too indolent to apply ourselves to study, even to the extent of the small means we have. The reading of works on matters of general professional interest, is but little in amount, compared with what it would be at home. Until quite recently, we have had no opportunity of associating, in a professional manner, with our medical brethren, by means of societies. And, notwithstanding the advantages we may gain from this association, we cannot hope to obtain the improvement from it that we could in a society of men who are constantly brushed up to the present ideas of the medical world, which, in the field, no matter how assiduous a man may be, is a condition it is impossible for him to keep himself in.

To consider some of the disadvantages we labor under in trying to keep pace with the advance of our profession, let us examine them briefly as connected with the branches taught in our medical schools. In regard to anatomy and physiology, the young man with his new diploma, as a general thing, does not give up his dissections and experiments. He has plenty of time, while waiting for practice, to amuse and instruct his mind in this manner. When he enters the army, he is immediately debarred from these pursuits to any considerable degree. Some of the most important branches of our profession were entirely stricken from our experience when we became medical officers. I allude to midwifery and the diseases peculiar to women and children. To be sure some of us may have had the opportunity of attending, through the pangs of childbirth, some savory contraband; or of watching the mutations of disease in some fair damsel at division headquarters; or of alleviating the infant sufferings of some tender offshoot of humanity. But, as a general thing, these very important departments of medical science are as a thing of the past to the young physician in the army. He must study them all over again.

Now let us look at our disadvantages in regard to the practice of medicine. In the first place, at home, when the physician is called to see a person, he takes it for granted that his patient is sick, and never thinks of doubting the truth of what he says in regard to his pains, aches and queer feelings. There is no particular object for equivocation. But how is it in the army? O! ye malingerers—for what a vast amount of trouble, and wear and tear of patience on the part of your surgeon, are ye accountable! What little malingering there is at home, is generally treated without the aid of the physician. Little Johnny doesn't want to go to school, and says he has the stomach-ache. Grandma's services are called in requisition. She says, Johnny must take some castor oil. He refuses. Then Johnny must go to school; and he goes, because castor oil is worse than school. Detection is not so easy, however, in the army. There is a prospect of an engagement with the enemy, and Patrick O'Toole has a severe pain in his back, tearing him all to pieces. We say that O'Toole must have a large blister on his back. Patrick submits, because a blister, he thinks, is not so bad as fighting. So, in the first place we have to find out whether a man is sick, and then go to work to treat his disease. And under what advantages do we treat him? We have a very small variety of medicines to select from, although the supply table contains most of the old-fashioned drugs, and I suppose is extensive enough, with the exception of calomel and tartar emetic, which were stricken from the table because some persons, who ought to have been dismissed from the service, did not know how to use them. We have to treat our patients at times in tents, which cannot be made comfortable in cold winter weather, although at the approach of spring we get new tents and boards to floor them with. We often cannot get the quality and variety of diet adapted to the wants of certain cases of disease. The men frequently have to be treated in a malarious region for diseases which seem to baffle all remedial measures, and we find it almost impossible to get the patient removed to a more healthful climate. We have the element of home sickness to contend with, which is not unfrequently the main cause of keeping a man on his sick bed. These, and many other causes, show that we treat disease here under a great disadvantage, and that the young man does not gain that experience in the proper management of the sick, which he ought to be gaining to fit him for future usefulness in his profession.

In regard to progress in the study of materia medica, about all we can do is to read the Dispensatory; a not very exciting species of entertainment, certainly. Our observations on the operations of the older drugs are confined to the very few articles given in the supply table—and of the new preparations which from time to time are placed before the profession in the journals, we know nothing.

Chemistry, also, which to most young men is a very pleasing branch of study, and which is a most valuable adjuvant to the practice of medicine, is entirely laid aside, for the reason that we have neither apparatus nor tests with which to pursue investigations.

The facilities for the study of diseased organs after death are so extremely limited, that we may consider ourselves nearly as much debarred from the study of pathological anatomy, as from the preceding branch.

The advantages and disadvantages of an army life in regard to improvement in surgery, have been set forth, as far as operative surgery is concerned, in the early part of this paper. The remarks in regard to the disadvantages we labor under in the practice of medicine, refer equally well to the treatment of surgical disease.

I have thus gone over briefly the advantages and disadvantages of an army experience to the medical man—more particularly as regards the young physician, just entering upon practice; and if the ideas of the members of this society upon the subject agree with mine, we must come to the conclusion that some of the most important branches of the profession remain dead to him for the time being.

In presenting these thoughts to your minds, only that which bears upon the subject in a professional light is adduced. Patriotism or other motives will, in the minds of some, outweigh all professional disadvantages. Of these I have nothing to say.

Hoping to hear the opinions of older and wiser heads than mine, I leave the subject for your discussion.

DISCUSSION.

Dr. Calhoun remarked that, in his opinion, the disadvantages of the army and field, to the medical officer, in a professional point of view, had been a little highly colored by the essayist, while some of the advantages had not been mentioned. One of the benefits derived from army practice is that the young medical man learns to *systematize*. The essayist had alluded to the restriction of the practitioner in the field and in camp to a comparatively limited *materia medica*. He thought that the supply table furnished all the variety of medicinal agents required; and considered the objection to army practice, as narrowing down our views and experience of the action and value of remedies, as of little weight. Over-medication was a much more serious and frequent error in civil practice than is true of the opposite in that of the military surgeon. The poorest practitioners, in his opinion, were those addicted to over-medication, and who were constantly experimenting with new remedies.

Another important principle was demonstrated and impressed on the mind of the surgeon in army practice, namely, the prevention of disease, by proper attention to *hygiene* and *sanitary laws.* At home, the practitioner's efforts are chiefly directed to the cure, not to the prevention of disease, which latter is the great aim in military practice. A recent English publication by Dr. Shrimpton, on the Crimean war, has very forcibly illustrated what can be achieved in preventing disease, by proper sanitary measures and expedients, and what fearful results follow from their neglect.

Again, army life has this advantage to the medical man, that it enlarges his knowledge of men, and sharpens his faculties in reading and interpreting human nature and character.

Dr. IRWIN was well aware of the great difference between army and civil practice; but while he could not deny the disadvantages of the former, in some respects, in others he thought there was a decided advantage. Army surgeons learn to rely more on their own observation; the mind is trained to come more rapidly to true conclusions, and a correct diagnosis, and to meet emergencies, than in private practice. He learns to rely on absolute facts more than on the statements of the patients, in which we do not repose the same implicit belief as in private practice. He could not agree with the author in regard to the want of opportunity for autopsical observations. He considered them ample, if embraced. The great drawback in field practice was the want of facility for observing results.

Dr. JEWETT referred to another reason why army practice is not calculated to enhance the professional attainments of the physician. *Chronic diseases* are a sealed book to us here. As soon as a disease becomes settled, the patients are sent off, and we have no opportunity to study its progress. Furthermore, he thought there was as much tendency, if not more, to *routine* in army as in private practice.

Dr. VANDEVERE agreed with Dr. Jewett. The number of serious diseases in the army is very limited; there is not much of a variety. As soon as a bad case turns up, he is sent to general hospital. The same circumstances interfere with surgical practice.

Dr. A. N. DOUGHERTY, Medical Director of the 2d Corps, an honorary member of the Society, being present, was introduced by Dr. Calhoun, and invited to take part in the discussion. He remarked that the subject had already been so fully discussed that he had little to add. One of the greatest disadvantages, perhaps, resulting from army practice, was the assuming of a certain brusqueness in manner, a sort of arbitrary way, which might not be very popular at home, and might prejudice people against the army surgeon returning to civil practice. The opportunities for professional study he considered to be as ample here as anywhere, excepting, of course, minute investigations of a chemical or microscopic nature.

He wished to ask the opinion of members on a new method of treating pneumonia, of which he had been informed by a medical gentleman of Sacramento, Cal., in charge of a hospital there. The treatment consists in the continued administration of moderately large doses of acetate of lead. In 20 cases reported, all of which recovered, the average duration of the disease is claimed as only seven days; certainly a very favorable result, if future experience should confirm the efficacy of the treatment.

The same authority spoke of syphilis as being exceedingly frequent and unusually virulent in Sacramento, and in most cases traceable to prostitutes among the Chinese population of that city, who appeared to be peculiarly subject to the ravages of the venereal poison.

Dr. Dougherty then called attention to the comparative utility of hospital knapsacks and the so-called "field companion." The general expression of the members was in favor of the "field companion."

A vote of thanks was passed to Dr. Whiston for his able and interesting essay, and the Secretary instructed to send it to such journal for publication as the author might designate.

TRICHINIASIS IN GERMANY.

A few months ago there was a festive celebration in Hettstädt, a small country town near the Hartz Mountains, in Germany. Upwards of a hundred persons sat down to an excellent dinner, and, having enjoyed themselves *more majorum,* separated, and went to their homes.

Of these one hundred and three persons, mostly men in the prime of life, eighty-three are now in their graves; the majority of the twenty survivors linger with a fearful malady; and a few only walk apparently unscathed among the living, but in hourly fear of an outbreak of the disease which has carried away such numbers of their fellow-diners.

They had all eaten of a poison at that festive board, the virulence of which far surpasses the reported effects of *aqua tophana,* or of the more tangible agents described in toxicological text-books. It was not a poison dug out of the earth, extracted from plants, or prepared in the laboratory of the chemist. It was not a poison administered by design or negligence. But it was a poison unknown to all concerned; and was eaten with the meat in which it was contained, and of which it formed a living constituent.

When the festival at Hettstädt had been finally determined upon, and the dinner had been ordered at the hotel, the keeper of the tavern arranged his bill-of-fare. The introduction of the third course, it was settled, should consist, as usual in those parts of the country, of *Rostewurst und Gemüse*. The *Rostewurst* was, therefore, ordered at the butcher's the necessary number of days beforehand, in order to allow of its being properly smoked. The butcher, on his part, went expressly to a neighboring proprietor, and bought one of two pigs from the steward, who had been commissioned with the transaction by his master. It appears, however, that the steward, unfortunately, sold the pig which the master had not intended to sell, as he did not deem it sufficiently fat or well-conditioned. Thus the wrong pig was sold, carried on a barrow to the butcher, killed and worked up into sausages. The sausages were duly smoked and delivered at the hotel. There they were fried and served to the guests at the dinner-table.

On the day after the festival, several persons who had participated in the dinner were attacked with irritation of the intestines, loss of appetite, great prostration and fever. The number of persons attacked rapidly increased; and great alarm was excited in the first instance by the apprehension of an impending epidemic of typhus fever or continued fever, with which the symptoms observed showed great similarity. But when, in some of the cases treated by the same physician, the features of the illness began to indicate at first acute peritonitis, then pneumonia of a circumscribed character, next paralysis of the intercostal muscles and the muscles in front of the neck, the hypothesis of septic fever, though sustained in other cases, had to be abandoned with respect to these particular cases. Some unknown poison was now assumed to be at the bottom of the outbreak; and an active inquiry into all the circumstances of the dinner was instituted. Every article of food and material was subjected to a most rigid examination, without any result in the first instance. But when the symptoms in some of the cases invaded the muscles of the leg, particularly the calves of some of the sufferers, the description which Zenker had given of a fatal case of trichinous disease was remembered. The remnants of sausage, and of pork employed in its manufacture, were examined with the microscope, and found to be literally swarming with encapsuled trichinæ. From the suffering muscles of several of the victims small pieces were excised, and under the microscope found charged with embryonic trichinæ in all stages of development. It could not be doubted any longer, that as many of the one hundred and three as had partaken of *Rostewurst* had been infested with trichinous disease by eating of trichinous pork, the parasites of which had, at least in part, escaped the effects of smoking and frying.

This awful catastrophe awakened sympathy and fear throughout the whole of Germany. Most of the leading physicians were consulted in the interest of the sufferers, and some visited the neighborhood where most of the afflicted patients remained. But none could bring relief or cure. With an obstinacy unsurpassed by any other infectious or parasitic disease, trichiniasis carried its victims to the grave. Many anthelmintics were arrayed to destroy, if not the worms already in the flesh, at least those yet remaining in the intestinal canal. Picric acid was employed until its use seemed as dangerous as the disease; benzole, which had promised well in experiments upon animals, was tried, but was unavailing. As case after case died off, and the dissection of each proved the parasites to have been quite unaffected by the agents employed, the conviction was impressed upon every mind that a man afflicted with flesh-worm is doomed to die the slow death of exhaustion from nervous irritation, fever, and loss of muscular power, in systems essential to existence.

But medical science had only just unravelled a mystery; and if it could not save the victims, it was determined, at least, to turn the occasion to the next best account. The cases were, therefore, observed with care, and chronicled with skill. All the multifarious features of the parasitic disease were registered in such a manner, that there can hereafter be no difficulty in the diagnosis of this disorder. A valuable diagnostic feature was repeatedly observed—namely, the appearance of the flesh-worm under the thin mucous membrane on the lower side of the tongue. The natural history of trichina in man was found to be the same as that in animals.

All observations led to the conviction that the trichina encapsuled in the flesh is in the condition of puberty. Brought into the stomach, the calcareous capsule is digested with the flesh, and the trichina is set free. It probably feeds upon the walls of the intestines themselves; for the irritation of the intestines begins before the bringing forth of young trichinæ has taken place. Copulation is immediately effected; and, within a few hours, or a short portion of days, from sixty to eighty live embryos leave the female, and begin their own career of destruction.

This consists, in the first instance, in an attempt to pierce the walls of the intestinal canal. Great inflammation of the entire surface ensues, ending not rarely in death of the villous or mucous membrane, or in the formation of masses of pus on its surface. Sometimes there are bloody stools. But these severe symptoms only ensue when much trichinous meat has been eaten. When less has been consumed, pain and uneasiness in the abdomen are produced, accompanied, however, in all instances by wasting fever and prostration. The embryos actually pierce the intestines, and are found free in the effusion, sometimes serous, sometimes purulent, which is always poured out into the abdominal cavity. Thence they again proceed towards the periphery of the body, pierce the peritoneum, causing great irritation, and sometimes peritonitis, to the extent of gluing the intestines together to a coherent mass. They next proceed to the muscles nearest to the abdomen; arrived at the elementary muscular fibres, which, under the microscope, appear as long cylinders with many transverse striæ, they pierce the membranes, enter the fibres, eat and destroy their striated contents, consume a great part of the granular detritus, moving up and down in the fibres until grown to the size necessary for passing into the quiescent state. They then roll up in spiral or other irregular windings, the bags of the muscular fibres collapse, and only where the trichinæ lie a calcareous matter is deposited, perhaps by the trichinæ themselves, which hardens into perfect capsules round the parasites. A muscular fibre may harbor one or several parasites; but every fibre invaded by a single parasite loses its character entirely, and becomes a bag of detritus from one end to the other.

If it be remembered that one ounce of meat filled with trichinæ may form the stock from which, in a few days, three millions of worms may be bred; and that these worms will destroy in the course of a few weeks not less than two millions of striated muscular fibres —an idea of the extent of destruction produced by these parasites can be formed. We are not in a position to say to what proportion of the fifty or sixty pounds of muscle required for the performances of the human body these two millions of elementary fibres actually amount. In the muscles nearest to the abdomen, the destruction is sometimes so complete that not a fibre free from parasites can be found. This amounts to complete paralysis. But death is not always produced by the paralysis; it is mostly the result of paralysis, peritonitis, and irritative fever combined. No case is known in which trichiniasis, after having declared itself, became arrested. All persons affected have either died, or are in such a state of prostration that their death is very probable.

Most educated people in Germany have, in consequence of the Hettstädt tragedy, adopted the law of Moses, and avoid pork in any form. To some of the large pig-breeders in Westphalia, who keep as many as two thousand pigs, the sinking of the price of pork has been a ruinous—at the least, a serious—loss. In the dining rooms of the hotels in the neighborhood of Hettstädt, notices are hung up announcing that pork will not be served in any form in these establishments. To counteract this panic, the farmers' club of the Hettstädt district gave a dinner, at which no other meat but pork was eaten. But it has had no appreciable effect. The raw ham and sausages of Germany are doomed to extinction. The smoked and fried sausages must necessarily be avoided. * * * *

In the south of Germany, some people now say that the Hungarian pigs are most frequently affected with trichinæ. This rumor, like the famous pork dinner of the farmers' club, may, however, have been set up with the intention of quieting apprehension about the native pigs. We have already mentioned the accident which befell the crew of a merchant vessel. They shipped a pig at Valparaiso, and killed it a few days before their arrival at Hamburg. Most of the sailors ate of the pork in one form or another. Several were affected with trichinæ and died. Of those whose fate could be nquired into, only one seems to have escaped the parasites. Another outbreak in Saxony has carried away twelve persons. A fourth wholesale poisoning by trichinæ is just reported from Offenbach, the Birmingham of Hesse-Darmstadt. Of upwards of twenty persons nfected, three had already died when our correspondent's letter left. Numerous sporadic cases of fever, and epidemics of inscrutable peculiarity, but referred to an anomalous type of fever, are now claimed by medical authors, and with much show of reason, to have been outbreaks of trichiniasis, or flesh-worm disease. Several German physicians experimentalized with a view of finding a cure for this terrible disorder. Professor Eckhardt at Giessen, we are told, has obtained permission to try the disease and supposed remedies upon a murderer under sentence of death. We have not been told whether his reward in case of success is to be a commutation of his capital sentence; but should hope this to be the case. The experiment, even if it should not have the romantic character indicated, will probably teach some curious details of the life of these parasites. Almost everywhere, the commonest rules of cleanliness are disregarded in the rearing of pigs. Yet pigs are naturally clean animals, avoiding, like dogs and cats, all contact with ordure. Though they burrow in the earth, and in summer wallow in the mud, they abhor the heaps of excrements mixed with straw in and upon which they are frequently kept. A due regard to cleanliness will prevent trichinæ in the pig. In wild boars, of which many are eaten in the country round the Hartz Mountains, trichina has never been found. Neither has it been met with in sheep, oxen, or horses. Beef is the safest of all descriptions of meat, as no parasites have ever been discovered in it. They have also never been found in the blood, brain, or heart, of those animals in whose striated muscles they love to reside.—*British Medical Journal.*

[Lately, the common ground-worm has been found to be infested by trichinæ, one of the probable sources of the infection of swine.]

ON THE CHANGES OF FORM OF MAMMALIAN BLOOD-CORPUSCLES.

THE *Centralblatt für die Medicinischen Wissenchaften* of the 5th ult. contains an important paper by Dr. Klebs, assistant at the Pathological Institute at Berlin, on "The Changes of Form of the Red Blood-corpuscles in Mammalia." Dr. Klebs finds that, when the disk-shaped blood-corpuscles, which are found joined together in so-called *rouleaux* in the cooled blood of dead animals, are heated to the temperature of the body, care being taken to prevent evaporation, the following change of shape takes place. The substance of the corpuscle begins to accumulate at one part of the margin, and the outline of the corresponding opposite part becomes flattened and afterwards indented. The substance then generally accumulates more strongly at the ends caused by the indentation; hard protuberances (*zacken*, Dr. Klebs calls them) are found, which project over the margin, and a broader protuberance is often formed first, and then divides into two smaller ones. This process is repeated over the whole of the disc of the blood-corpuscle, which thus becomes quadrangular, or, more frequently, pentagonal or hexagonal in shape. A strong affluence towards a point always precedes the formation of the protuberances, which alter their shape very slowly, but constantly; they are seen to be absorbed completely, and new ones then appear near the places of the old ones. The corpuscles with protuberances rest upon the lengthening and shortening ends of these protuberances, and the formation of the latter occasions a very peculiar motion of the corpuscles, inducing a state of constant oscillation, while the liquid is perfectly motionless. When two corpuscles are touching one another with their horizontal protuberances, and vibrating towards each other, slight rotatory movements often occur. The protuberances are triangular when in a fresh state and viewed sideways; they do not protrude much above the surface. In the *rouleaux* the terminal blood-corpuscles first exhibit the protuberances, and that on the free side. Six various sorts of blood were examined, and all exhibited the phenomenon in the same way; but there were some differences as regards the period when the contraction occurred. The contractibility of the blood-corpuscles survives the death of the individual a considerable time; in the case of some, *rouleaux* are commonly found which separate into forms with protuberances on the application of heat twenty-four hours after death; after forty hours they generally appeared globular, and no longer adhered to one another. Nasse and Bothin state that the corpuscles become ultimately round when immersed in a concentrated solution of salt; but Dr. Klebs finds the shape depends upon what it was previous to immersion, and that the corpuscles with protuberances retain that shape after immersion, at least for a time (allowance being made for the effect of exosmosis), although they appear to be petrified, as it were, and no further movement of contraction is observed. Dr. Klebs has made use of this power of the salt solution to arrest any change of form in the corpuscles to determine what shape these bodies have when circulating in the living animal. A vein of a rabbit was cut open and the wound filled with the salt solution. The result was that the corpuscles, on examination, appeared to be exceedingly thin discs with a great tendency to the formation of folds. The central depression was much more extended than when seen under ordinary circumstances, and the broad margin thinner. A great number of the corpuscles showed the form with the protuberances described above. Dr. Klebs, therefore, concludes that the contraction must occur within the bloodvessels. He finishes his paper by giving as his reason for publishing these results of his researches with the least possible delay, and not waiting till he could work up the question from various points of view, that he hopes to secure very numerous fellow-laborers in this most interesting field of research.—*The London Reader.*

VINEGAR AND ITS ADULTERATIONS.

Cider vinegar has always been preferred by our people on account of its wholesome properties; and at one period a sufficient quantity of it was manufactured to supply the public demand. This is not now the case, as most of the vinegar which is at present consumed in cities is made from high wines (whiskeys) and molasses. Vinegar may be made by several different processes, and from a great number of substances. It is made from apple-juice by the slow process of fermentation, but from high wines or liquids containing alcohol it is manufactured by a quick process, consisting of exposing warm high wines mixed with water to the atmosphere, while passing in thin streamlets over a very extended surface of beech-wood shavings. By this mode of operating, the alcohol combines chemically with a certain quantity of oxygen and forms acetic-acid vinegar. This is the system which is now most extensively followed in vinegar manufactories. Any substance which contains sugar may be converted, by fermentation, into alcohol, and finally into acetic acid. At present, when high wines and substances containing sugar, such as molasses, are so high in price, possibly the vinegar which is made from these may be adulterated by sulphuric acid before it reaches the purchaser. It is well known that when the price of any article becomes high, adulteration is practised to a much larger extent with it, because the addition of a small quantity of a cheap foreign substance largely increases the profits. As a small quantity of sulphuric acid added to vinegar permits the use of a large quantity of water, this acid has been frequently and extensively used for adulteration. It has been asserted by manufacturers of vinegar that as the acetic acid made from weak wines, beer, malt, and molasses, was liable to putrid fermentation and decomposition, some sulphuric acid was necessary to counteract this tendency and prevent it from becoming turbid and vapid. The least quantity employed for this purpose was about one gallon to one thousand gallons of vinegar. But when the manufacture of vinegar is properly conducted, there is no necessity for adding any sulphuric acid. The mode of detecting such acid in vinegar is described by Dr. Muspratt as follows:—"If the vinegar be suspected to contain a considerable quantity of sulphuric acid, make a solution of sugar and heat it to 200° Fah.; if a drop of the suspected vinegar is added to this, it will carbonize the sugar, causing a blackish spot to appear at the point where the vinegar came in contact with the saccharine solution. This happens when the vinegar contains one three-hundredth of its weight of sulphuric acid; when it contains from six-hundredths to eight-hundredths of its weight of this acid, it produces a greenish spot in the solution." But the principal test for this acid in vinegar is the use of a soluble salt of baryta, such as the chloride. When this is added to vinegar containing sulphuric acid, insoluble sulphate is produced, which falls down in a heavy white powder. Moderate quantities of good vinegar are beneficial in assisting digestion, but sulphuric acid does not favor digestion, and when taken in considerable quantities it injures the coating of the stomach. In every sense, then, sulphuric acid is an injurious adulteration of vinegar, and should not be permitted. Hydrochloric and nitric acids have also been employed for adulterating vinegar, but to such a limited extent that they do not invite public attention.

Vinegar made from pure alcohol and water does not possess the flavor of wine or cider vinegar, and is therefore inferior to them for table use; but a little acetic ether added to it renders it agreeable. Raw spirits containing some fusel oil produce a more pleasantly flavored vinegar than refined spirits; hence a few drops of fusel oil added to rectified spirits, in making the wash for vinegar, improves its aroma. A little oil of cloves or butyric ether added in the same manner improves its flavor. A very small quantity of cider vinegar gives a large quantity of whiskey vinegar a pleasant flavor. An infusion of chicory is sometimes added to high wine vinegar, to give it the color of cider vinegar. Fancy or aromatic vinegars are sometimes used for the toilet, for fumigation, and table use. A good aromatic vinegar is made by macerating cloves, rosemary, sage, nutmegs, caraway, peppermint, cinnamon, and calamus, each one ounce, in two gallons of strong vinegar, adding a little tincture of camphor. In fact, any of the essential oils, such as those of cloves, bergamot, or lavender, in vinegar, render it aromatic.—*Scientific American.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

MARCH 14th.—*Fatal Case of Epistaxis.*—Reported by Dr. AYER.

I. M., aged 62, a provision dealer in this city, of temperate and industrious habits, and of decidedly lymphatic diathesis, had abstained mostly from meats for several months, for want of appetite, and had taken milk as a chief article of diet. For years he had been subject to frequent attacks of nose-bleed. During the last year he had been overworked, and was confined to an ill-ventilated shop. In February last Dr. Ayer first visited him, on account of a troublesome hæmorrhage of the gum, at the base of a decayed molar tooth. The bleeding was stayed by application of dilute liq. chlor. ferri. His appearance was anæmic, pulse feeble, and muscles shrivelled and particularly flabby. Tinct. ferri mur., gtt. xv. *ter die.*, was ordered, free use of animal food, and less labor. The following week, bleeding occurred profusely from a slight scratch on the hand. A hæmorrhagic tendency was exhibited throughout the system. Influenza succeeded, with abundant coryza, and daily or more frequent attacks of nose-bleed, resulting from "blowing the nose, or warming the feet." Yet he daily attended to his business, though evidently too weak to make the necessary exertion.

On March 6th, at 5.30, A.M., Dr. Ayer was again called in haste to him. A neighboring physician had been called in two hours before, and was present. The hæmorrhage had commenced at 2 o'clock, and continued to increase up to this period. The right nostril was bleeding profusely, and the left slightly; the blood also poured down freely through the posterior nares, and was discharged from the mouth. The pulse was regular, though weak; heart's action rapid. The patient was sitting on the bed. Pinching the nostrils availed naught. The nostril was plugged with cotton saturated with liq. chlor. ferri. dilut., and afterwards with a strong solution of tannic acid, without effect. Ice was freely used over the nose and in the mouth. Injections of the iron and tannin were subsequently employed. It was thought desirable to avoid plugging the posterior nares, especially as no proper instrument was at hand. Brandy and wine were administered freely. At 7 o'clock the bleeding had decidedly diminished, both front and back. Occasional fainting occurred, which soon passed off. At 8 o'clock the hæmorrhage had entirely ceased; the patient occasionally raising slight coagula. He continued comfortable till 10, when Dr. Ayer left him, ordering a continuance of the tr. ferri., brandy and ice, and nourishment—increasing the iron to twenty-five drops every three hours. He remained comfortable through the day, took nourishment, had no bleeding, and passed the night with some quiet sleep.

7th.—Slight hæmorrhage once or twice during the day. Nostrils closed by coagula. In the afternoon, the tinct. ferri was omitted, and a pill containing half a grain of opium, two grains of tannin and one of acetate of lead was ordered every two hours. After giving four or five pills, nausea and drowsiness occurred, so that they were given afterwards only occasionally.

8th.—Passed the night comfortably; no hæmorrhage, but occasional fainting. The drowsiness increased during the day, and the pill was omitted. Pulse diminishing; at 5 o'clock, P.M., rapid sinking; drinks taken with great difficulty; slight consciousness. Carbonate of ammonia in mist. camphoræ was ordered. At 9 in the evening patient more sunken and insensible, and at 4 o'clock, A.M., of the 9th he expired.

One or two dejections occurred during the illness, and micturition was painful. Sandy deposits in the urine had previously been noticed by his wife, but had not been submitted to analysis.

A hæmorrhagic tendency was evidently established in this case, in part natural to the patient, but doubtless increased by the abstinence from animal food, over exertion and general prostration. No organic affection was suspected.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, MAY 5, 1864.

DEATH OF DR. JOHN WARE.

This community has so long looked up to Dr. John Ware as one of the leading members of the medical profession, that the announcement of his sudden death, which took place on Friday, the 29th ult., brings to all the sense of a great public loss. As a consulting physician in cases of great responsibility or difficulty, his professional brethren have so long enjoyed his wise counsel that they hardly knew how to spare him. He was endeared to all by the gentleness and kindliness of his manner, by his hearty interest in the welfare of the sick, and by his ever fresh and ready intelligence. The profession in this city has never lost one of its number who has filled up a larger measure of honorable devotion to the highest interests of humanity. He was a man of a very complete life. Attaining to a position among the first in purely professional standing, his reputation as a philanthropist was in no degree less. He was a man of most untiring industry. Looking beyond the pecuniary reward of professional success, he always showed an ardent desire to contribute his share to the progress of medical science; and the various well-matured results of his thoughtful professional life which he has published, will take a permanent place in standard medical literature. We feel, as every one must who knew him, that in his death we have lost a personal friend. The great reaper has made sad havoc of late among the respected elders of our profession here, and a heavier burden of responsibility rests upon those who are left behind to live up to the high standard of personal and professional character which they have set up.

At the regular meeting of the Suffolk District Medical Society, held April 30th, 1864, the President, Dr. J. Mason Warren, announced to the Society the death of their distinguished Fellow, and proposed that the regular business be suspended to pay a fitting tribute to his memory; whereupon Dr. Jacob Bigelow rose, and said :—

"I rise, Mr. President, to interrupt the accustomed order of proceeding, by announcing an event already brought home but too surely to the knowledge of most of us, the death of our honored and beloved associate, Dr. John Ware. Within the last few months we have had occasion more than once to pay to distinguished members of our Society suddenly taken from our midst, the solemn tribute of our last regard. But never has a more general sense pervaded our professional community, of affection and regret, than that which now follows with sad and grateful recollections the memory of a wise, faithful, friendly and blameless physician.

"Dr. Ware was a surviving representative of a family long honored among us, and of whose pervading and influential reputation, his own character formed no inferior part. Commencing life as an obscure professional student and practitioner in a somewhat humble part of the city, struggling for many years against difficulties, silently building the solid platform which was to sustain his future eminence, he at length became a man whom society needed, and whose claims and services it was not slow to recognize. He became a writer, a teacher, and for many years an extensive and laborious practitioner, and when at length his impaired health compelled him to forego a large part of his ordinary duties, he found in country retirement, in philosophic studies, in theological inquiries, and in the intercourse of his many friends, a solace congenial to his placid, unaspiring, rational and truth-loving character.

"From the trials to which human nature is doomed, and from which a shorter life might have saved him, he was not destined to find exemption. A brave and noble son, already marked by high promise and qualified by hereditary talent, as well as by filial sympathy, to become the support of his declining years, and the successor of his fame—gave up his young life on the altar of his country. This shock, although manfully borne, and submitted to with Christian fortitude, yet was seen to wear slowly on his already impaired frame, and no doubt accelerated the termination of a life thus abruptly shorn of so large a portion of its necessary parental hope.

"During a lifetime which considerably exceeded the average duration of human existence, he followed with unwavering devotion the path of conscientious duty. His kindly nature forbade him to speak ill even of those who crossed his path, and I do not now know that he had an enemy. The benignity of his temper, the impartiality of his reasoning, the clearness of his perception, the justice of his inferences, and the attractive language in which he conveyed his thoughts, caused his presence to be welcomed by the sick and his counsel to be sought and respected by his professional brethren.

"His opinions on medical subjects are well known. Vindicating the power of his science for good, but deprecating its too frequent *perversion* for evil, he pursued the independent path of professional rectitude, and guarding alike against unsound influences, and impulsive and hasty generalizations, he subordinated to the welfare of the patient the self-love of the practitioner. He did not claim infallibility for his art, nor impute to his own exaggerated skill the inevitable processes of nature. With the frankness and humility which indicate a strong and self-reliant mind, he watched and guided, but never recklessly thwarted, the restorative influences inherent in the unmolested constitution.

"Dr. Ware, knowing the hereditary tendency of his family to cerebral disease, had looked forward with some apprehension to the possible occurrence of chronic, perhaps of paralytic infirmity. May we not say that he was most happy in consummating a beautiful life by what the ancients have fitly termed a beautiful death. His race was run, his peace was made, the mission of his life worthily, nobly fulfilled. There were ties that still bound him to earth, but these were lessening and loosening, and the time of their inevitable disruption was but too obviously at hand.

"'Then, with no fiery, throbbing pain,
No cold gradations of decay,
Death broke at once the vital chain,
And freed his soul the nearest way.'

"Let us preserve and cherish in our hearts the image of his recollected virtues. Let us strive like him to uphold the just, the honest, the truthful standard of our science and profession—so that when we shall approach the termination, to some of us already not far remote, we may feel, like him, the sustaining consciousness that we have not lived in vain."

After the conclusion of Dr. Bigelow's remarks, Dr. John Homans spoke as follows :—

"Mr. President, I do not rise to add to the just and comprehensive remarks just made by Dr. Bigelow on the character of Dr. Ware after his arrival at manhood, but to say a few words regarding his youthful habits, and to offer two short resolutions signifying our appreciation of the character and worth of our deceased brother. Dr. Ware entered college in the year 1809, when I first became acquainted with him from his brother, Rev. Henry Ware, Jr., who was in the class above and my classmate. This circumstance brought me into a somewhat intimate acquaintance with the subject of this notice. His industry, his modest demeanor and his truthfulness attracted the observation and secured the esteem of all his associates. Having graduated in 1813, he entered on the study of medicine with the late Dr. John Gorham, with whom I was a student. Here the same moral qualities were conspicuous in him as in college. He evinced a remarkable zeal in the acquisition of medical knowledge, and had a happy faculty of communicating his ideas to others. His exemplary conduct in college is noteworthy on account of the early age at which he entered—a few months over 13 years. I submit the following resolutions for your consideration :—

"*Resolved,* That in the death of Dr. John Ware, the Society has lost a learned and beloved member, who for more than forty years assiduously and successfully devoted himself to the practice of his profession, and by public teaching to the advancement of medical science.

"*Resolved,* That his modest and urbane manners, his purity of life and his unflinching integrity have won the esteem and love of all who knew him, and have engraved on our hearts the model of a Christian gentleman.

"*Resolved,* That a copy of the above be published by the Secretary and presented to his afflicted family."

The above resolutions were unanimously adopted.

From a biographical sketch of Dr. Ware, in the *Daily Advertiser,* we learn that his age at the time of his decease was 68 years. He was son of Rev. Henry and Mary (Clarke) Ware, and was born in Hingham, Mass., 19th December, 1795. His father was for several years minister in Hingham, and was afterwards Hollis Professor of Theology in Cambridge. His mother was daughter of Rev. Jonas Clarke, of Lexington, and granddaughter of Rev. Thomas Hancock, who was grandfather of the celebrated John Hancock. The subject of this notice graduated with high honors at Harvard College in 1813. Immediately after leaving college he began the study of medicine, and received his degree of M.D. in 1816, when he began the practice of his profession in Duxbury, but in 1817 he removed to Boston, where he resided the remainder of his life. He soon acquired an extensive practice, and attained to the highest rank in professional skill. In 1832 he was appointed Professor of the Theory and Practice of Medicine in the Medical Department of Harvard College, and held this office until 1858. He published various medical lectures and discourses; essays on "Croup," on "Delirium Tremens," and on

"Hæmoptysis;" a volume on the "Philosophy of Natural History," and a "Memoir of Henry Ware, Jr." (Boston, 1846.) He was for several years President of the Massachusetts Medical Society. He was also a Fellow of the American Academy of Arts and Sciences. During the year 1828 he was one of the Editors of this JOURNAL.

PREVALENCE OF SMALLPOX IN THE CITY.—This community has been much agitated of late by all sorts of groundless and exaggerated stories of the prevalence of smallpox amongst us. This has amounted almost to a panic in some parts of the city, and has had the effect, we are told, of deterring some people from coming into it from the country. False rumors are current that some of the public schools have been closed on account of it. We cannot learn that this is true in a single instance; as why should it be? All the children in the public schools are fully protected by vaccination. The simple truth is, that there happen to be at the present time more cases of smallpox in Boston than usual; but nearly or quite all the deaths reported from it have occurred in the State Hospital at Rainsford Island, miles away. The very diligence of the new City Physician in instituting a general inquiry, through the Police, to ascertain whether the whole community is protected, as it should be, by vaccination, has had the effect to increase the alarm. We have the best authority for stating that the disease, at least in its severe form, is limited almost entirely to strangers who come to us from the British Provinces, or from country towns in the interior, who have never been vaccinated. Were it not for this introduction of culpably unprotected persons from year to year, the disease would die out here for want of fuel.

A FRIEND who has recently passed a successful examination at Washington, qualifying him for the rank of Surgeon of Volunteers, gives us the following account of his examination:—

"The examination commenced on Monday, and was continued every day through the week. Four days of written replies to questions, the candidates being placed in a room, with writing materials *et pretera nihil*, except an orderly to prevent communications. Fifth day, each candidate taken alone by one of the commission of three. Oral examination. Sixth day, at Douglas Hospital, in the wards and deadhouse. Operations on the subject. The object of the Board seemed to be not merely to ascertain whether the candidates knew enough to be a Surgeon or Assistant Surgeon of Volunteers, but to discover the whole extent of his attainments. In anatomy, chemistry, physiology, pathology, his point of saturation (so to speak) was reached. This you will see can be readily done by a division of subjects among the members of the Board. I should have said that an autobiography is required and a disclaimer of any connection at any time with any form of irregular practice. With all this you will see that the Government are put in possession of the full professional value of each of its medical officers of this corps."

DR. J. L. CHANDLER, of St. Albans, Vt., in a note to the Editors, says:—"I have run upon Dr. Gallup's 'Epidemics of Vermont,' which

I had not seen for the last forty years, and find myself in error (see Journal, p. 202) in supposing the 'spotted fever' of fifty years ago 'did *not* bear the same aspect' which belongs to the present so-called epidemic. I think myself in error, too, when I said that *Dr. Gallup* named it 'typhus syncopalis.' It was probably Dr. Tully, of Connecticut, who gave that name to this, or some other form of malignant fever prevailing at that time. My own impressions, made a half century ago, in untutored boyhood, should succumb at once to the clear descriptions of the disease in the Doctor's book, where the same symptoms of cerebro-spinal meningitis reported in the present epidemic, are portrayed. His account of the results of varying methods of treatment, though perhaps inconclusive, are nevertheless interesting and suggestive."

Caution.—We advise physicians to be on their guard against life insurance agents who seek to induce them to insure their lives on the promise of an appointment as medical examiner for the company the agent represents—the position to be immensely lucrative, the physician to be the *sole examiner*. The position turns out not to be so very lucrative, and somehow or other *more than one physician finds himself to be the sole examiner*. A certain agent of a New York company has been practising this game successfully in this city.

The name of Dr. W. O. Johnson, formerly of Cambridge, was accidentally omitted from the list of those who have joined the Suffolk District Med. Society the last year, published in this Journal April 14.

Dr. James Bryan, of Philadelphia, Surgeon U. S. Vols., is now in charge of the U. S. General Hospital at Pittsburg, Pa. This hospital is provided with 500 beds, some of them, however, being in tents, which afford comfortable quarters for the milder cases. It is situated about two miles from the city, on a pleasant and healthy elevation, and its internal arrangements are represented as admirably contrived and its regulations faithfully executed.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, April 30th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	53	50	103
Ave. mortality of corresponding weeks for ten years, 1853—1863,	38.5	38.3	76.8
Average corrected to increased population - - - -	00	00	84.41
Death of persons above 90 - - - - - - -	0	0	0

Deaths in Boston for the week ending Saturday noon, April 30th, 103. Males, 53—Females, 50.—Accident, 3—inflammation of the bowels, 4—disease of the brain, 7—inflammation of the brain, 4—bronchitis, 3—consumption, 13—convulsions, 1—croup, 7—diarrhœa, 2—diphtheria, 4—dropsy, 1—dropsy of the brain, 2—drowned, 1—erysipelas, 1—scarlet fever, 6—typhoid fever, 1—disease of the heart, 3—homicide, 1—insanity, 1—disease of the kidneys, 3—congestion of the lungs, 5—inflammation of the lungs, 8—marasmus, 2—old age, 1—phlebitis, 1—pleurisy, 1—premature birth, 2—rheumatism, 2—scalded, 1—smallpox, 4—suffocation, 1—tabes mesenterica, 1—teething, 1—tumor, 1—unknown, 4.

Under 5 years of age, 45—between 5 and 20 years, 13—between 20 and 40 years, 20—between 40 and 60 years, 13—above 60 years, 12. Born in the United States, 84—Ireland, 14—other places, 5.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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PARALYSIS, WITH DISEASE OF THE DORSAL PORTION OF THE SPINAL CORD.

[Read before the Boston Society for Medical Improvement, February 8th, 1864, and communicated for the Boston Medical and Surgical Journal.]

By Charles E. Ware, M.D., Boston.

The subject was a strong and vigorous man, aged 47 years, who had always enjoyed good health. His first symptoms appeared in February, 1861, after great fatigue, excitement and exposure during a lecturing campaign at the West. They were, a prickling sensation in his right leg, followed soon by an uneasy feeling in his hips, and disability in both legs. He was about, through the summer, but gradually lost the power of motion in his legs. He was able to walk until November, when he went to a water-cure establishment. There he failed more rapidly, and began to have some tonic spasm and twitching in his lower extremities. From that time the disease slowly developed itself, until the time when I first saw him, June 7th, 1862.

He then had almost entire paralysis of motion of the lower extremities, and partial of the upper, so that he could only turn himself with assistance in bed. He had tonic spasms of his legs, unaccompanied by much pain. No loss of sensation, and no pain nor tenderness anywhere. There was a slight labor in his respiration, apparently from imperfect action of the diaphragm. In no part of the spinal column could there be detected the least tenderness on pressure, nor any sensitiveness on the application of heat or cold. The mind was perfectly clear and active. There was not a symptom of renal, cardiac, pulmonary, or other organic disease which could explain the history. He had not at any time had any acute symptoms which could be referred to the spinal cord.

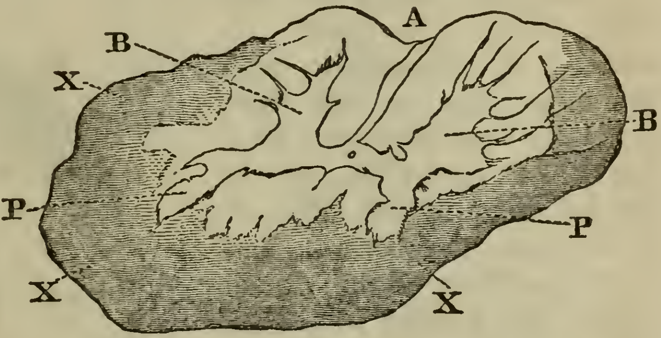
When he entered the Hospital, April 21st, 1863, although he had lost flesh, his general aspect and condition were the same. His appetite was good. His pulse and tongue were natural. Digestion was perfect; the bowels were rather costive, and there was incontinence of urine during the spams of the lower extremities. The latter were always excited by motion. In the Hospital, he gradually failed in strength and flesh. His appetite became more uncertain, and a few weeks before his death he had an attack of vomiting and diarrhœa, which prostrated him very much. In August, pus was first noticed in his urine, and soon became considerable in quantity, with little dysuria, but with some pain in his loins and sacrum. The twitching of his lower extremities became less. His mind remained perfectly clear. He died quietly, Oct. 6th, 1863.

He was never regularly under the care of any physician, nor was he even willing to follow up any course of treatment, until after he entered the Hospital. Then, at his own request, he was put upon a course recommended by Dr. Brown-Séquard, the principal feature of which was hydriodate of potash and ergot, with extract of stramonium.

A careful *post-mortem* examination was made by an experienced anatomist. The brain was perfectly healthy. The spinal cord was removed with great care. Although perhaps somewhat under the normal size, it presented no appearance, to the eye alone, of any disease whatsoever. Except some disease about his urinary organs, which was undoubtedly secondary to his paralysis, all the other organs of the body were found perfectly healthy. The spinal cord was handed to Dr. Dean, who made the following report upon it.

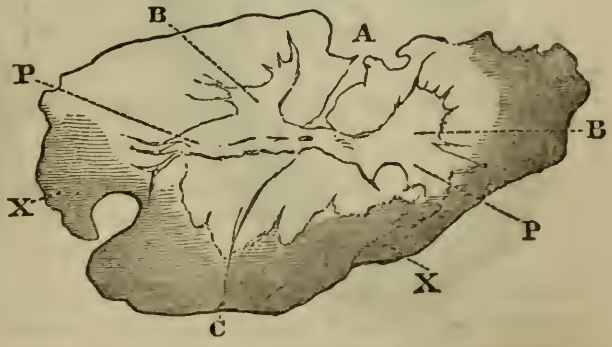
Examination of the Spinal Cord. By JOHN DEAN, M.D.—The entire spinal cord was sent to me by Dr. C. Ellis; it was removed soon after death, and was in a very perfect condition when received, not having sustained the slightest mechanical injury. A careful external examination showed no signs of disease, and with the single exception that the whole cord was perhaps rather small and delicately formed, it appeared to be entirely healthy. It was then carefully divided into three portions—the first including the cervical enlargement, the second the dorsal portion of the cord, the third the lumbar enlargement and *cauda equina.* These were suspended in strong alcohol for nearly three weeks, until quite hardened, and sections were then cut for the purpose of further examination. I commenced by examining, under the microscope, sections cut from the cervical and lumbar enlargement, and could find no trace of morbid appearance throughout their entire extent. The form of the gray substance was as usual, the anterior and posterior cornua were perfectly symmetrical, and contained the usual multipolar nerve-cells. In a word, sections might have been cut from any part of either of the enlargements from which the great nerve-bundles proceeding to the extremities are derived, and shown as perfectly normal specimens. On examining the dorsal region of the cord, a series of very remarkable appearances was at once met with, involving so great a degree of asymmetry between the two sides of the cord, and so remarkable a distortion of the median fissure, both anteriorly and posteriorly, with a corresponding displacement of the central canal, as to lead at first to the supposition that the cord must have sustained some severe mechanical injury. This, however, as stated above, was not the case, and a little reflection will show that the appearances represented in the accompanying figures could hardly have been produced by any degree of mechanical twisting of the cord. This is made especially evident by comparing Figs. 1—5 with Fig. 6; the latter figure being taken from a section in the lower part of the dorsal region of a healthy adult cord, and drawn by the camera lucida with the same magnifying power as the rest of the figures. It will therefore serve very well for the purpose of comparison.

Fig. 1.



In the upper part of the dorsal region the cord was about two thirds the natural size (Fig. 1); and in section the anterior and posterior cornua were readily made out, and were tolerably well developed; the anterior cornua containing the usual large multipolar cells. The external outline of the cord was, however, much distorted, the axis of the cord represented by the fissure being displaced some 30°, followed by a corresponding displacement of the anterior and posterior cornua from the right line. Around the lateral and posterior portions of the cord, a border of degenerated or softened substance was found (shown in the figures by the shaded portions, X X), which was quite friable, as was evidenced by the difficulty found in hardening it, and by the breaking down of the structure in the attempt to cut sections. Examined under higher powers, this belt of morbid substance was found to consist of broken down nerve-tubes, with granular matter, corpora amylacea and larger nodules, which latter, when treated by an acid, left an organic skeleton, and were probably formed by a deposit of phosphate of lime around a nucleus of degenerated material. A little lower down the greatest degree of degeneration was noticed (Fig. 2), the belt of morbid material extending on the right hand side of the cord, around through the lateral white columns to the anterior portion of the cord, where the substance was quite broken down, the cord, as will be

Fig. 2.



seen in the figure, presenting a ragged and broken margin. In the posterior portion of the cord, the morbid belt was quite wide, and on the left hand side (Fig. 2) will be seen a distinct channel hollowed out in the posterior white columns, and bounded by a smooth margin, which was traced longitudinally for a distance of nearly half an inch. Very numerous corpora amylacea and earthy nodules were found in this region. In this figure the gray substance has undergone some alteration; it has not only been displaced by the morbid changes in the white columns, but has, especially on the left side of the figure, undergone a decided atrophy, both the anterior and posterior cornu on that side being very much reduced as compared with the other side, or still more evidently when compared with the normal cord (Fig. 6). In the following figures (Figs. 3, 4, 5) from the central and lower portions of the dorsal region, this atrophy of the anterior white and central gray substance, together with the degeneration of the posterior and lateral white columns, becomes still more evident, the nerve-cells, especially on the atrophied side of the cord, becoming smaller and less numerous, the anterior cornu on the left side, in Fig. 4, hardly containing any nerve-cells.

Fig. 3.

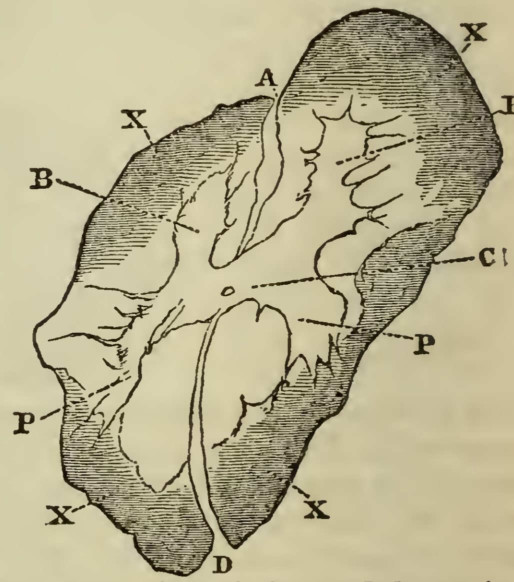


Fig. 4.

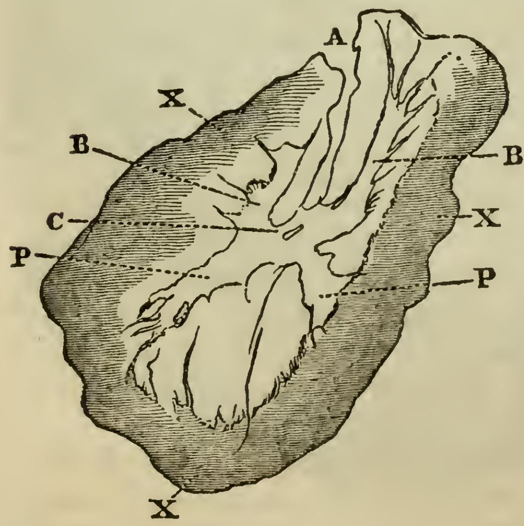
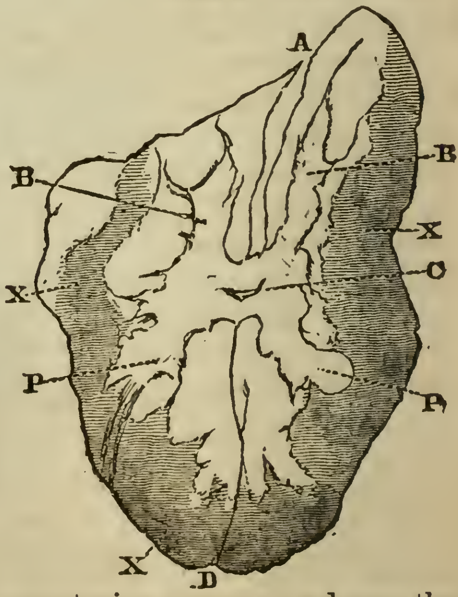


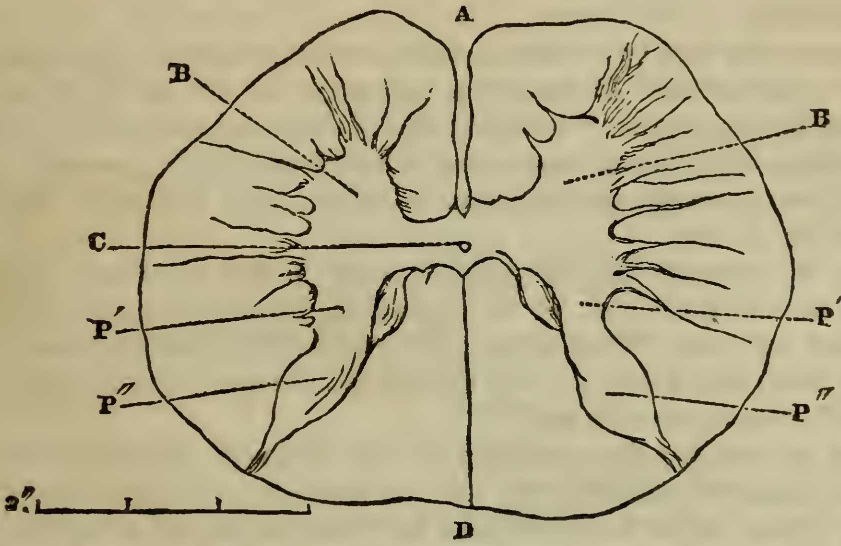
Fig. 5.



Very few cells were found in the posterior cornua, and on the atrophied side no trace could be found of the *posterior vesicular* column, usually so well developed in this region.

The belt of degenerated substance is largely developed in this portion of the cord, extending (Figs. 3, 4) quite into the anterior white column.

FIG. 6.



These were the chief morbid appearances noticed, and the case seems very remarkable as presenting evidence of such decided degeneration and morbid change confined to so comparatively small a portion of the cord, completely circumscribed and limited to this portion, the remainder of the cord being perfectly healthy.

Description of the Figures.

FIG. 1.—Section from the cord close to the commencement of the dorsal region.
FIG. 2.—Section from the upper dorsal region.
FIG. 3.—Section from the central dorsal region.
FIG. 4.—Section from the same.
FIG. 5.—Section from the lower dorsal region.
FIG. 6.—Section from adult, healthy cord, near the central dorsal region.

The lettering corresponds in all the figures.

A.—Anterior median fissure.
D.—Posterior median fissure.
C.—Central canal.
B.—Anterior cornu.
P.—Posterior cornu. P′.—Cervix cornu. P″.—Caput cornu.
X.—Belt of morbid substance.

The figures are all drawn with the same power, by the camera lucida, the magnifying power being about 8½ diameters.

OUR NATIVE MATERIA MEDICA.

BY FRANCIS MINOT WELD. AN ESSAY TO WHICH ONE OF THE PRIZES OF THE BOYLSTON MEDICAL SOCIETY WAS AWARDED.*

[Communicated for the Boston Medical and Surgical Journal.]

SHORTLY after the close of our last war with England, Dr. Jacob Bigelow issued a series of volumes on the Native Medicinal Plants of the United States: a work written with so great care and thoroughness, and illustrated with such accuracy and beauty, as to be still our classic manual in this branch of medical literature. In the preface to this work, the author alludes to the effect of the blockade of our ports by the British, in cutting off supplies of drugs. He therefore strongly urges an examination of all our native plants, so as to render ourselves, as far as possible, independent of foreign productions.

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* A prize awarded to under-graduates of Harvard Medical School.

During the last two years, a much more stringent blockade than the one just alluded to has been enforced on the ports of a large section of our country; bringing about such an inconvenient scarcity of certain drugs as to cause more strenuous efforts to be made to secure these precious articles, than to obtain even the most necessary materials of war.

Let us suppose New England, instead of the Southern States, to be at war with the rest of the Union, and hemmed in and blockaded by land and sea. What substitutes could her rocks and sands, chilled by frost and snow, furnish for the rich drugs of the tropics, ripened under an equatorial sun?

Let us examine the condition of our Materia Medica: see which of the drugs in common use are of domestic production, and how many others might be introduced into cultivation, or otherwise supplied; learn precisely the number and value of those which cannot possibly be furnished from our own resources; and, lastly, find whether among native products hitherto neglected, we may not discover substitutes, partial or complete, for some of the foreign drugs.

The general plan pursued in the present paper is this. Taking the classification and list of medicinal agents adopted in Stillé's work on Materia Medica, the latest available authority, the principal sources of our present supply will be stated in connection with each drug separately. The words native and naturalized are used with reference to the New England States. Where Stillé has omitted to speak of drugs mentioned with approval by other writers of authority, particularly Dr. Bigelow, they will be annexed to the list. Next, taking each class of drugs separately, our resources and more important deficiencies in that class will be very briefly discussed, with whatever remarks the subject may suggest. Finally will come a concise summary of the results arrived at.

The principal authorities consulted are—The United States Dispensatory (1858), Stillé's and Wood's works on Materia Medica, Dr. Bigelow's Medical Botany, various State Geological Reports.

CLASS I.—LENITIVES.

Mucilaginous.	
Acacia,	Africa.
Althæa,	Naturalized from Europe.
Cetraria,	Europe—also native.
Chondrus,	" " "
Linum.	Native.

Salep,	Levant.
Sassafras medulla,	Native—good subs. for acacia.
Sesamum,	India.
Tragacantha,	Asia Minor.
Ulmus,	Native.
Amylum,	"
Ginseng,	" —much like glycyrrhiza.
Amylaceous.	
Avenæ farina,	Native.
Hordeum,	" [Arum triphyllum.
Maranta,	W. Indies—might be made from
Oryza,	Southern States.
Sago,	East Indies.
Tapioca,	West Indies.
Fatty and Oleaginous.	
Adeps,	Native.
Amygdala,	Barbary.
Cetaceum,	Marine.
Glycerina,	Home manufacture.
Ol. Olivæ, Ol. Amygd., Ol. Cacao,	Imported.
Serum,	Native.
Gelatinous.	
Gelatina.	Native.
Icthyocolla,	Imported—also made here.
Collodium,	Cotton from South.
Saccharine.	
Glycyrrhiza,	Europe.
Mel,	Native.
Saccharum,	" from maple.

CLASS II.—ASTRINGENTS.

Mineral.	
Alumen,	Imported—can be made here.
Bismuthi subnit.,	Bismuth is found at Monroe, Ct.
Plumbum,	Lead ores in N. H., and Hampden Co., Mass.
Zinci acetas,	Germany. A carbonate of iron and zinc exists in New Hampshire and at Worcester, Mass.
" carb. præcipit.	
Vegetable.	
Acid tannicum,	Obtainable from native products.
" gallicum,	Tannic acid.
Catechu,	India.
Galla,	Mediterranean—there are native specimens, probably useful.
Geranium,	Native.

Hæmatoxylon,	Central America.
Kino,	Africa.
Krameria,	Peru.
Quercus alba and tinctoria,	Native.
Rosa Gallica,	Cultivated.
Rubus villosus—R. trivialis,	Native.

CLASS III.—IRRITANTS.

Mineral.

Acidum acet., Acetum,	Native.
“ nitricum,	From nit. of potash or nit. of soda, both usually imported.
Chlorinium and aq. chlor.,	From native sources.
Calx chlor. and ac. mur.,	Require sulphuric acid for their manufacture.
Ac. sulphuricum—its compounds and preparations,	Usually made from combustion of sulphur; may be made in abundance from native sulphate of iron.
Liq. ammoniæ,	From native products.
Potassa and preparations,	“ “ “
Sodæ carbonas,	Made artificially with aid of sulphuric acid.
“ boras,	Europe, India, &c.
Calx, &c.,	Native.
Argenti nitras,	“ ores.
Cupri sulphas,	“ “
Zinci chloridum,	“ “
Antimonii terchlor.,	Antimony in Maine and N. H.

Vegetable Irritants.

Sinapis,	Cultivated.
Capsicum,	“
Pix abietis,	Native.
Mezereon,	Somewhat cultivated.
Pyrethrum,	Cultivated.
Sabina,	Native.
Ol. monard. punct.	Middle States. Could be cultivated here.
Clematis Virginica,	Native.
Arum triphyllum,	“
Ranunculus bulbosus,	“

Animal Irritants.

Cantharis vesicatoria,	Vicinity of Mediterranean.
“ vittata,	Southern States.
“ atrata-marginata,	Native.

CLASS IV.—TONICS.

Specifics.

Ferrum,	Native.

Cinchona.	South America.
Salix,	Native.
Cornus Florida,	"
Prunus Virginiana,	"
Simple Bitter Tonics.	
Colomba,	Africa.
Gentiana,	Europe.
Quassia,	West Indies.
Simaruba,	" "
Sabbattia,	Middle and Southern States.
Centaurium,	Europe.
Chiretta,	India.
Coptis,	Native.
Xanthorrhiza,	Southern and Western States.
Menyanthes trif.—Aletris farinosa, Polygama polyg.	Native.
Stimulant Tonics.	
Anthemis—Eupatorium,	Cultivated.
Angustura—Cascarilla,	West Indies.
Marrubium,	Naturalized from Europe.
Contrayerva,	Central America.
Calamus—Angelica,	Native.
Aurantii Cortex,	West Indies and Mediterranean.
Wintera,	South America.
Millefolium,	Cultivated by Shakers and others.
Tonic and Aromatic Stimulants.	
Anisum, Carum, Fœniculum, Lavandula, Melissa, Mentha piperita and viridis, Origanum, Ros marinus, Ruta, Salvia and Thymus,	Are common garden herbs.
Asarum, Gaultheria, Hedeoma, Sambucus,	Native.
Ol. cajuputi,	Moluccas.
Cinnamomum,	Ceylon.
Cassia—Piper,	Java.
Canella—Pimenta,	West Indies.
Caryophyllus—Myristica,	Moluccas.
Cardamomum,	India.
Coriander,	Europe.
Cyminum,	Egypt.
Monarda,	Vide Ol. monardæ.
Zinziber,	W. Indies, Africa, S. America.

CLASS V.—GENERAL STIMULANTS.

Heat and Electricity.	
Vinum,	Native—from grape, currant, &c.

Alcohol,	Native.
Ol. terebinth.—Creasotum,	“
Ammoniæ carb.,	“
Arnica,	Northern Europe.
Toxicodendron,	Native.

CLASS VI.—CEREBRO-SPINAL STIMULANTS.

Narcotics.

Opium,	Asia—may be produced here.
Lactucarium,	Cultivated.
Hyoscyamus,	Naturalized.
Belladonna,	Native.
Stramonium,	“
Humulus,	Cultivated.
Cannabis Indica,	India.
“ sativa,	Native.

Antispasmodics.

Assafœtida,	Persia, &c.
Dracontium—Valeriana,	Native—cultivated.
Succinum,	Found at Nantucket and M. Vineyard.
Castoreum,	Russia and Canada.
Moschus,	Russia and China.
Camphora,	China.
Æther sulphuricus,	
Æther chloric fort.,	Native.
Æther nitricus,	“
Chloroform,	“
Cuprum ammoniatum,	“
Zinci oxid. and Valerianas,	“

CLASS VII.—SPINANTS. (Tetanica.)

Spinants in General.

Nux vomica—Strychnia,	Ceylon, &c.
Faba St. Ignatii,	Philippines.
Toxicodendron,	Vide Gen. Stimulants. Native.
Ergota,	“ Emmenagogues. “
Sodæ boras,	“ Irritants. Europe.

CLASS VIII.—GENERAL SEDATIVES.

Cold.

Acidum hydrocyanicum dil.,	Native.
Potassii cyanidum,	“

CLASS IX.—ARTERIAL SEDATIVES.

Digitalis,	Europe. Cultivated here.
Veratrum viride,	Native.

CLASS X.—NERVOUS SEDATIVES.

Aconitum,	Cultivated here for ornament.
Conium,	Native or naturalized.

Cicuta,	Native.
Cerii oxalas,	Sweden.
Cocculus,	Malabar.
Lobelia,	Native.
Tabacum,	Cultivated in Conn. and Mass.
Veratrum album,	Europe. Little used.
" sabadilla.	Mexico. Used in manufacture of veratria.

CLASS XI.—EVACUANTS.

Errhines.

Asarum Europæum,	Europe.
Helenium autumnale,	Native.

Emetics.

Zinci sulphas,	From native zinc.
Antimonii et potassæ tartras,	Antimony, native in small quantities.
Ipecacuanha,	South America.
Alumen,	Vide Astringents. Native.
Cupri sulph.—Sinapis,	" Irritants. "
Scilla,	" Expectorants. Europe.
Tabacum—Lobelia,	" Nerv. Sedatives. Native.
Gillenia,	Native.
Hydrargyri sulphas flavus,	Vide Alteratives. California.
Phytolacca decandra, Sanguinaria, Iris versicolor, Apocynum, Dirca palustris, Erythronium Americanum,	Are all native.

Cathartics.

Sulphur lotum,	From volcanic regions.
Magnesia—M. carb. and sulph.,	From native sources.
Sodæ sulphas,	In various manufactures.
Potassæ tartras and bitartras,	France.
Sodæ et potassæ tartras,	From pot. bitart. and sod. carb.
Oleum olivæ—Manna,	Southern Europe.
Cassia fistula—Tamarindus,	India. Cassia also in W. Indies.
Oleum ricini,	Cult. in Ohio, and occasionally in New England.
Senna,	Egypt.
Cassia Marilandica,	Native. About equal to senna.
Rheum,	Turkey, &c. Native quality poor.
Juglans,	Native. Good subs. for rheum.
Colocynthis,	Asia Minor.
Jalapa,	Mexico.
Scammonium,	Syria.
Gambogia,	Ceylon, &c.
Aloes,	Cape of Good Hope, India, &c.
Oleum tiglii,	India.
Helleborus,	Europe.

Podophyllum,	Native. Like jalap.
Triosteum,	" Not abundant.
Oleum terebinthinæ	Vide Stimulants. Native.
Elaterium,	Produced in Eng.; can be here.

Expectorants.

Senega.	Native in West. N. Eng. (Gray.)
Cimicifuga,	Native. Of doubtful value.
Allium,	Cultivated.
Ammoniacum,	Persia.
Myrrha,	Africa.
Balsam Peruv.—Tolut.,	Central and South America.
Benzoinum,	Sumatra.
Pix liquida,	Native.
Copaiba,	Vide Diuretics. S. America and [W. Indies.
Scilla,	Europe.
Terebinthinæ—Ammoniæ carb.,	Vide Gen. Stim. Native.
Ammoniæ murias,	" Alteratives. "
Ipecacuanha,	" Emetics. South America.
Sulphur,	" Cathartics. Italy, &c.
Assafœtida,	" Antispasmodics. Persia.
Asclepias tuberosa,	Native. Highly recommended by Drs. Bigelow & Chapman.

Diaphoretics.

Liquor ammoniæ acetatis,	Native.
Potassæ citras—Citric acid,	From the Mediterranean, &c.
Spiritus ætheris nitrosus,	Native.
Pulv. ipecac. et opii,	Vide Ipecac. and Opium.
Guaiacum,	West Indies.
Sassafras—Solidago,	Native.
Serpentaria,	Middle and Western States.
Xanthoxylum Americanum,	Native. Much like Mezereum and Guaiacum.
Ammoniæ carbonas,	Vide Gen. Stim. Native.
Potassæ nitras,	" Diuretics. "
Antimonii et potassæ tart.,	" Emetics. So. America.
Sarsaparilla,	" Alteratives. Europe, &c.
Mezereum,	" Irritants. Cult. a little.

Diuretics.

Potassæ nitras,	Native.
" acetas,	"
Ammoniæ phosphas,	"
Armoracia—Carota—Uva ursi,	"
Scoporius—Petroselinum,	Cultivated.
Taraxacum—Juniperus,	Naturalized.
Propylamin,	Native.
Scilla,	Vicinity of Mediterranean.

Buchu,	Cape of Good Hope.
Copaiba,	West Indies and So. America.
Cubeba,	Java, &c.
Colchicum,	Europe. Somewhat cultivated here.
Potassæ bitartras,	Vide Cathartics. Ac. tart. imported.
Sodæ boras,	Vide Irritants. Italy, &c.
Spiritus ætheris nitrosi—Liquor ammoniæ acetatis,	" Diaphoretics. Native.
Dulcamara,	" Narcotics. Native.
Ol. terebinthinæ,	" Stimulants. "

Emmenagogues.

Ergota,	Native.
Rubia tinctorum,	Southern Europe.
Sabina—Cantharis,	Vide Irritants. Native.
Juniperus,	" Diuretics. "
Sodæ boras,	" Irritants. Europe.
Ferrum,	" Specific Tonics. Native.
Millefolium—Ruta,	" Stimulants. Cultivated.
Tanacetum,	" Anthelmintics. Native.
Guaiacum,	" Diaphoretics. W. Indies.
Aloes,	" Cathartics. So. Africa.
Helleborus niger,	" " Europe.

Anthelmintics.

Mucuna,	East and West Indies.
Stanni pulvis—Tanacetum,	Native.
Filix mas,	" probably.
Chenopodium—Spigelia,	Southern States.
Santonici semen,	Persia.
Granatum,	So. Europe and Africa. Somewhat cultivated.
Absinthium,	Naturalized.
Azedarach,	Asia. Southern States.
Bayera (kousso),	Abyssinia.
Cucurbita pepo,	Cultivated everywhere.
Kameela,	India.
Saoria,	Abyssinia.
Zatze,	Africa.
Oleum terebinthinæ,	Vide Gen. Stimulants. Native.

CLASS XI.—ALTERATIVES.

Hydrargyrum,	California, &c.
Arsenicum,	Native.
Iodinum,	Sea-weeds and Saratoga Springs.
Oleum Morrhuæ,	Along the coast of New England.
Potassæ chloras,	By passing chlorine through a solution of potassæ carbonas.
Ammoniæ murias,	Native.

Sarsaparilla,	From Mexico and So. America.	
Chlorinium,	Vide Irritants.	Native.
Colchicum,	" Diuretics,	"
Dulcamara,	" Sedatives.	"
Guaiacum,	" Diaphoretics.	W. Indies.
Mezereum,	" Irritants.	Cultivated.

[To be continued.]

ON THE HYPODERMIC TREATMENT OF UTERINE PAIN.

By J. Henry Bennet, M.D., late Physician-Accoucheur to the Royal Free Hospital.

During the present winter I have used, with prompt and marked success, the hypodermic injection in several cases of severe dysmenorrhœa, with or without hysterical complications, and in several others of uterine and ovarian neuralgia, and of facial neuralgia having a uterine origin. The relief has been obtained in from fifteen to thirty minutes, without being attended or followed by the headache, loss of appetite, or nausea, which are so frequently the result of the use of opiates in any other way, even by injection into the rectum. This latter mode of administering opiates has hitherto been my sheet-anchor in the treatment of uterine spasms and pain, and is certainly most efficacious; but it is not unfrequently attended by all the above-mentioned drawbacks, from which the hypodermic injection appears to be singularly free. In nearly all the instances in which I have tried this mode of introducing opiates into the system, the sedative result alone has been produced: there has been no subsequent bad effect whatever.

In one case of severe uterine tormina and pain, the result of arrested menstruation from cold, I injected thirty minims of the solution of morphia. In half an hour the pains, which had been agonizing for the previous twenty-four hours, were calmed. A good night's rest followed; and the next morning the menses had resumed their course, and my patient was all but well. In another similar case, the uterine pain was accompanied by severe hysterical symptoms. The injection was followed by the same favorable result—ease, sleep, and rapid disappearance of all morbid symptoms.

Owing to the complete control over the element of pain which the hypodermic injection of opiates appears to give, I have been able to carry on the necessary treatment in an interesting case of uterine disease, which I should otherwise have been obliged to treat under chloroform, or at a great disadvantage. The patient, a young German lady of twenty-four, came to Mentone last autumn, by direction of her medical attendants, with the view of spending the winter in the South. She was considered to be suffering from neuralgia, facial and general, and from nervous irritability of the system in general. She had been travelling with her husband from place to place, from bath to bath, in the search for health, for more than two years. On being consulted, I recognized the existence of a host of uterine symptoms, and found that the neuralgic and nervous illness had manifested itself after a severe confinement, which had occurred about three years ago. The discovery of extensive inflammatory ulceration of the neck of the womb gave the key to the state of ill health. Singularly enough, none of her previous medical attendants had suspected the uterine origin of the neuralgia. Such cases are always very difficult to treat—interference with the uterine lesion all but invariably rousing the neuralgia. I have repeatedly had cases of the kind that I could only examine and treat locally by giving chloroform to the full surgical extent on each occasion, and this I have had to do twenty or more times in the same patient.

With the patient in question the surgical treatment of the ulceration was borne tolerably well at first, but as the diseased surface became more healthy, and consequently more sensitive, endurance diminished. Every time the sore was touched severe neuralgia followed, and the general health began to flag. In former days I should have suspended all treatment, and have sent the patient to the country for a couple of months, to allow the nervous system to calm down, and to let Nature do her best. In this instance such a course was not desirable, my patient being very anxious to continue the necessary treatment so as to be locally cured before we separated in the spring. I thought, therefore, of the hypodermic treatment, and tried the injection of thirty minims of the solution of morphia immediately after each uterine dressing. This course was attended with complete success; no neuralgia ensued, and I have been able to continue uninterruptedly the treatment now all but brought to a successful issue. On one occasion I omitted the precaution, and was sent for at ten o'clock at night. I found the patient a prey to a most distressing attack of facial neuralgia, which had come on an hour before. She was positively convulsed and shrieking with agony. Chlorodyne, sulphuric ether, &c., had been taken, with no relief. I injected the thirty minims of morphia solution, and in twenty minutes she was calm and free from pain. It was repeated next day, and the facial neuralgia has not returned. This lady will no doubt gradually recover her health and get rid of the neuralgia when the uterine disease is thoroughly cured.

In a case of pure neuralgia, attacking first one and then another part of the body, I have injected from twenty to thirty minims of the acetate of morphia solution forty-two days in succession, without any unfavorable result. The neuralgia, which was very severe, was entirely subdued by it for about eighteen or twenty hours, when it re-appeared, gradually increasing in intensity until the injection again relieved it. At the end of that long period the pains gave way, the treatment having been either curative, or having allowed the neuralgic attack to wear itself out. During the entire period of treatment, the patient, a very delicate lady, slept better than usual, ate as well (her appetite being usually bad, and the digestive powers weak), and was able to take part socially in all that was going on around her. No one, indeed, was aware, except her family, that she was suffering from so painful a malady. To my surprise, I was able to suspend the morphia suddenly, without any of the distress and discomfort which is habitually observed when opiates have been long used and are abruptly abandoned.

From what I have seen of the hypodermic system, I believe that its use is capable of great extension in the treatment of pain generally. I consider that the injection of a solution of morphia after any operation would deaden pain, and produce a general calm of the system both soothing and beneficial to the patient. I think also that this result might be obtained in most cases without the usual drawbacks of opiates taken internally.

Some years ago I recommended in the Lancet the injection of opium into the rectum as a means of modifying and even arresting obstinate sea-sickness. Since then various additional cases have come under my notice illustrating its efficacy. The great difficulty to all medication in sea-sickness is the fact that the stomach absorbs fluids with difficulty. By injecting subcutaneously, this difficulty is got over. Moreover, a subcutaneous injection would be managed easier on shipboard than the rectal injection, to which most people have a very natural antipathy.

I have used all but exclusively a solution of acetate of morphia in distilled water. Nine grains dissolved in two ounces of water gives a strength about equivalent to that of laudanum. The liquor morphiæ of the Pharmacopœia contains spirit, and I have found that it constantly occasions small patches of painful inflammation; without the spirit, on the contrary, it appears to be quite innocuous. A moderate sized steel needle or canula I find preferable to the small gold one. The steel canula is sharper, and passes easier through the skin. By pinching firmly the fold of skin that has to be pierced between the finger and thumb, its sensibility to the puncture is much diminished. It does not seem to matter much, as regards results, in which region of the body the injection takes place. I have principally chosen the præcordial region for uterine and general pain, and for local neuralgia a spot as near to the region affected as possible.—*London Lancet.*

Dr. Livingstone.—We rejoice to learn that the report of the untimely end of Dr. Livingstone is unfounded. Late mails from the Cape of Good Hope report that he is well, and expected shortly to arrive at Cape Town.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, MAY 12, 1864.

Trichiniasis.—We published in our last number an extract from a foreign journal relating to the wholesale poisoning of a large assembly at Hettstädt, Germany. The fatal agent used was Trichina spiralis, served in hog's flesh at a feast. Disregarding the injunction in Leviticus concerning swine, "Of their flesh shall ye not eat, and their carcase shall ye not touch; they are unclean to you," eighty-three persons ate and died, and there can be no doubt that many instances of death attributed to poison or mysterious disease are due to the same cause. It would really seem as if the hog were created to serve as a foul nursery for the most loathsome parasites which infest man, and our aversion to him, which long ago amounted to complete abstinence from pork in every form, is now increased tenfold by the recent information that the encysted Trichinæ, which are occasionally found in the muscles of man on dissection and which we knew were derived from the muscles of swine, instead of being the harmless parasites we have hitherto considered them, form one of the most deadly diseases known. Unfortunately there are no symptoms of trichiniasis in the pig, after the encysted stage, and the presence of the capsules which contain the worms would hardly be noticed in its flesh on account of their near resemblance in color and the amount of fat with which the latter is infiltrated. The disease has never yet been met with in any herbivorous animal, and according to Langenbeck trichinæ have been found in great numbers in earth-worms (as many as 500 or 600 in a single worm), which form part of the food of swine when at liberty. A committee, consisting of Virchow, Remak, Gurlt and others, has been appointed by the Berlin Medical Society to investigate the whole subject. We add for the further information of our readers an interesting account by M. Davaine of the symptoms produced in man by this disease, for which we are indebted to the April number of *The American Journal of the Medical Sciences*:—

"When trichinæ exist in great numbers, their presence in the muscles or intestines produces severe and sometimes fatal symptoms. These symptoms may, in animals experimented on, present three successive, more or less distinct phases.

"The first phase is characterized by intestinal disorder, produced by the development of the larvæ in large numbers and their adhesion to the mucous membrane of the intestine. In this stage, M. Davaine has seen rabbits die with intense diarrhœa; one of two cats which he fed with trichinized meat had diarrhœa for at least a fortnight, but survived. Of five or six rats fed on a similar diet, one only, which was pregnant, died of diarrhœa, after abortion on the eighth day. According to M. Leuckart, the passage of the embryos of the trichinæ through the intestinal walls sometimes produces peritonitis. This intestinal phase often becomes blended with the next; it may be relieved by the expulsion of the worms by means of the diarrhœa; or may cease with the natural death of the worms.

"The second stage presents general symptoms—muscular pains, &c. These phenomena are dependent on the introduction of the trichinæ into the muscles; they rapidly acquire their maximum intensity, and have not a long duration. The appearance and duration of this stage are in complete relation with the development and length of sojourn of the trichinæ in the intestines; in fact, in this entozoon oviposition is not slow and of long duration as in many nematoid worms; the genital tube is rapidly formed, and the ova in its whole length are developed almost simultaneously, so that the embryos, arriving soon at muturity, are at once thrown out in large number into the intestine, and the mother trichina dies exhausted. If it be remembered that the embryos do not escape before the eighth day, that a certain number of days are required for their arrival in the muscles, and that new ones are not produced after six or seven weeks, it will be understood that the first symptoms of this stage can scarcely appear until the end of a fortnight after ingestion of the diseased food, that they must continue four or five weeks, and that after this they may disappear. This course of events is observed in animals; and in man, the symptoms of this stage have shown themselves and become aggravated from the third to the sixth week after infection. Most animals die during this stage; rabbits rarely survive; rats, on the contrary, generally resist it.

"If the animals do not die of the general symptoms or local disturbances proper to these two stages, the inflammatory symptoms cease, respiration becomes natural, and order is reëstablished. But, in some cases, the number of cysts formed in the muscles are sufficiently great to impede the proper exercise of their functions, and hence arise general debility, a kind of consumption which persists or becomes aggravated, and the animal dies of marasmus. M. Davaine has noticed this in rabbits, but especially in a rat.

"Recovery from these phases of trichinal infection may be apparently perfect. A rabbit, which M. Davaine kept during five months, became large and fat, although it had a large number of trichinæ in its muscles; a rat which had had these entozoa in considerable numbers during six months was to all appearance in good health. Hence he concludes that the trichinæ produce symptoms only when they are in the intestinal canal and when they are entering the muscles. Having become lodged in their cysts among the muscular fibres, they may remain harmless for an indefinite time. In every case except one, down to 1859, trichinæ have been found in the bodies of persons who have died of disease (generally chronic) or by accident, or in the dissecting room in bodies regarding which the previous history could not be obtained. In most cases, the cysts contained a cretaceous or fatty deposit, showing that they had probably existed for several years.

"The observations which have been made on the human subject in regard to the symptoms caused by trichinæ show that they belong, as in animals, to the initial period of infection. They consist in intestinal and muscular lesions; the latter coincide with the entrance of the parasite into the muscles, and are truly traumatic. In Zenker's case, the intestinal symptoms present were swelling and pain; in a case described by Friedrich, diarrhœa was present. In all cases, the most remarkable symptoms were violent rheumatoid pains in the muscles, not in the joints, which were considerably aggravated by attempts to extend the half-bent limbs. The other symptoms have been variable, but have had a strong resemblance to those of typhoid fever. In several cases there has been abundant sweating, and in one there was a very remarkable miliary and furuncular eruption. The animal heat was diminished in Friedrich's case; and in those observed in Voigtland by Freytag, the temperature never exceeded 102° Fah.

"The progress, duration, and severity of the disease in man are in relation to the number of trichinæ taken into the digestive canal. Of sixteen patients observed at Plauen by Drs. Boehler and Kœnigsdœrffer, eight, who were moderately affected, recovered in a month; four, more severely diseased, were ill two months; of four others, one died with ascites and colliquative diarrhœa at the end of two months, and three recovered slowly at the end of three or four months. Recovery does not imply the death of the trichinæ; it follows their inclosure in cysts.

"The diagnosis of trichinal infection has several times been made in the living human subject by removing a portion of muscle. M. Davaine thinks it probable that, during the first six or eight weeks of the disease, the diagnosis may be confirmed by searching for adult trichinæ in the alvine evacuations, produced naturally or by means of a purgative."

Messrs. Editors,—A few weeks since you announced in your "Obituary" simply the fact of the death of Dr. Moses Clarke, of East Cambridge. I had long known him, and had so admired his indomitable fortitude in resisting disease, that I feel unwilling to let his memory pass away without further notice. About fifteen years since I saw him for the first time. He was then suffering from hæmoptysis. I was struck with his admirable deportment. He calmly, nay *genially*, received his fate. I met him very often afterwards until within a few days of his death, and he was always the same. To see him was a delight. It was like seeing the first bursts of the brooks in spring. An elastic cheerfulness and a real Christian submissiveness to the will of Heaven seemed thoroughly to pervade him. He loathed croaking. It was impossible to be otherwise than joyful while in his presence. For months before his death his dysphagia was horrible, and at times he was aphonic. Yet he never complained. His smile was always contagious. It was not the smile of levity, but that of a man determined to meet with serenity and cheerfulness whatever the good God should choose to send upon him. His death is a real loss to all who knew him. They will miss the support that he used to give them by his silent example. I hope you may find a place in your Journal for the following brief items of his life. Yours, &c., H. I. B.

Dr. Moses Clarke was born January 18th, 1818, and died at East Cambridge, March 29th, 1864, aged 46 years. He was the son of Greenleaf Clarke, Esq., of Atkinson, N. H. He descended in a direct line from Nathaniel Clarke, a merchant and civilian, of Newbury, Mass., who died there in 1690. His mother was Julia Cogswell, daughter of Dr. William Cogswell, of Atkinson, a surgeon in the Revolutionary War, and successor of Gov. Eustis in the charge of the military hospital at West Point. She descended in a direct line from John Cogswell, a merchant of London, who came to this country in about 1630, and settled in Chebacco, Mass. His great uncles, both on his father's and mother's side, served in the War of the Revolution, as officers or privates, one of them entering the army at the age of fifteen years, and so youthful in appearance as to attract the notice of General Washington. The combined term of their service in the War, including that of his grandfather, amounted to more than thirty-five years. He received a thorough education at Atkinson and Pembroke academies, and his medical degree at Dartmouth College in 1843, having studied under the direction of Dr. Josiah Crosby, now of Manchester, N. H., and Dr. Dixi Crosby, Professor in the Dartmouth Medical Institution.

A friend, writing in the Cambridge Chronicle, says:—"He first entered upon his profession in Derry, N. H., where he remained about a year, when, in 1844, he removed to East Cambridge, where he continued in a successful practice almost up to the time of his death. He was a member of the School Committee of this city ten or twelve years, and City Physician about the same length of time, and in both situations discharged his duties with distinguished ability and fidelity. As a member of the School Committee he won the love and respect of his associates and of the teachers of our schools, and his long continuance upon the Board is evidence of the high appreciation in which he was held by his fellow citizens generally. As City Physician he went beyond his prescribed duties and outside of his profession, and labored to promote the moral and spiritual welfare of the inmates of our Almshouse, by means of a Sabbath School, which he superintended as long as his health would allow. He was a man of character and independence; not obstinate, but firm; if he saw his duty in a particular path, he did not fear to travel it, however rough and thorny it might be. The satisfaction which comes of duty done was to him far above any temporary applause resulting from a time-serving course. He was a true man in the fullest sense of the word; deceit formed no element of his character."

A relative, who knew him well, gives the following brief but comprehensive summary of his character:—"He was affectionate in all the relations of domestic life, patriotic and public spirited as a citizen, highly respected as a physician, honest and independent in action, heroic in suffering, and practical and consistent as a Christian.

> "'That life is long which answers life's great end.'

In this sense he died at a mature age."

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	49	48	97
Ave. mortality of corresponding weeks for ten years, 1853—1863,	39.8	36.4	75.2
Average corrected to increased population - - - -	00	00	82.65
Death of persons above 90 - - - - - - - - -	0	0	0

To Correspondents.—Dr. Stiles's paper on Sunstroke, Dr. Hosmer's cases of Heart Disease, and N.'s letter from Philadelphia, will have an early insertion.

Deaths in Boston for the week ending Saturday noon, May 7th, 97. Males, 49—Females, 48.—Accident, 2—anæmia, 2—apoplexy, 2—disease of the bowels, 1—congestion of the brain, 4—disease of the brain, 3—bronchitis, 2—cancer, 1—consumption, 19—convulsions, 5—croup, 3—debility, 1—diarrhœa, 1—diphtheria, 1—dropsy, 1—dropsy of the brain, 2—epilepsy, 1—scarlet fever, 4—typhoid fever, 2—gastritis, 1—disease of the heart, 2—infantile disease, 1—intemperance, 1—disease of the kidneys, 1—laryngitis, 1—congestion of the lungs, 4—inflammation of the lungs, 10—malformation, 1—measles, 1—paralysis, 1—purpura hæmorrhagica, 1—smallpox, 3—organic disease of the stomach, 1—suffocation, 1—tumor, 1—unknown, 9.

Under 5 years of age, 31—between 5 and 20 years, 16—between 20 and 40 years, 25—between 40 and 60 years, 13—above 60 years, 12. Born in the United States, 63—Ireland, 22—other places, 12.

THE

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CEREBRO-SPINAL MENINGITIS AS IT APPEARED AMONG THE TROOPS STATIONED AT BENTON BARRACKS, MO.

By Ira Russell, Surg. U.S.V. and Post Surgeon.

[Communicated for the Boston Medical and Surgical Journal.]

During the past winter, Benton Barracks have been a *rendezvous* for colored troops, and a temporary stopping place for white regiments going home on, and returning from, furlough. Benton Barracks are situated just outside the limits of the city of St. Louis, and in rather an unhealthy or malarious locality. The diseases most prevalent among the troops have been—measles, some cases of typhoid or typho-malarial fever, a large number of cases of pleuro-pneumonia, together with many of *cerebro-spinal meningitis*. The latter disease appeared first among the colored troops. Not less than fifty cases occurred among them during the months of January and February, more than half of which proved fatal. Latterly quite a number of cases have occurred among the white troops—the symptoms and progress of the disease not differing materially from that among the negroes.

At first the patient has a slight chill, a white tongue, a small, rapid pulse, a dull headache, with pain in back and limbs. These symptoms will continue from two to eight days, the patient all the while attending to his ordinary duties, or, perhaps, exhibiting a kind of lazy indifference. The appetite is very slightly affected. After remaining in the above condition for a shorter or longer time, the patient is suddenly attacked with a severe congestive chill, or collapse, becoming immediately helpless; falling down, perhaps, while in quarters or on drill, and very soon becoming comatose or wild with delirium. The surface is cold, pulse small or imperceptible, and the muscles of the back and neck spasmodically contracted, drawing the head back, with more or less rigidity of the muscles of the legs and arms. Deglutition is difficult or impossible, and death soon closes the scene. Or, perhaps, after remaining in this cold, delirious or comatose condition from twelve to forty-eight hours, reaction begins to take place, warmth returns to the surface, consciousness is partially restored, and with a longer or shorter period of fever, of a typho-malarial type, lasting from two to four weeks, the patient recovers, or again becomes comatose and dies. During the fever following the period of collapse, nearly all the cases have been attended with delirium, sometimes of a wild and incoherent nature, but more frequently of a comparatively mild form; the patient, when spoken to, answering questions rationally, but, when left alone, immediately beginning to talk incoherently.

I have already published, in the *St. Louis Medical and Surgical Journal*, several cases that have occurred among the negro troops, together with some general observations respecting the nature of the disease. I now offer for your consideration the following cases, which have occurred among the white troops at this post, and which will, I believe, give a correct idea of the symptoms and progress of this disease, and the morbid appearances observed after death. And here I will state, that these morbid appearances have been remarkably uniform, all the cases examined (not less than twenty in number) having shown inflammation of the *meninges*, with deposits of lymph, or pus, or both, upon the arachnoid membrane of the brain, and spinal cord, together with the effusion of serum into the arachnoid cavity, and more or less softening of the white and gray substance of the brain and spinal cord.

Case I.—William H. Allen, Co. B, 12th Mo. Cavalry, aged 18, admitted into hospital April 11th, and died April 20th. He was of small stature and delicate constitution. Had measles in the early part of the winter, and in fact has been in hospital the greater part of the time since his enlistment, until within three or four weeks. He was brought to hospital on a stretcher on the 11th of April, having been sick two days in quarters, during the greater portion of which time he was delirious. A comrade said that on the day he was taken sick he had drunk six bottles of ginger-pop, and had eaten heartily of trash purchased from a sutler. When admitted into hospital, he complained of pain in his head, back, neck, and throat. Action of the heart irregular; expression of countenance wild; mind at first tolerably rational, but in the course of two or three hours he became delirious, and talked incessantly, exclaiming—"Orderly, let me alone, I can't drill to-day," and various other incoherent expressions, giving no attention when spoken to, or heed to those about him. The muscles of the head and neck were spasmodically contracted, the head being drawn back. He was very restless, rising from the bed frequently, and walking across the ward with a wild, vacant stare, strongly reminding one of a person in a state of somnambulism. While in bed, his eyes were turned upward. Requires a nurse to keep him in bed.

April 12th.—Pulse quite regular and normal; hoarse; expectorates freely; restless. Has involuntary discharges of fæces and urine.

13th.—Deglutition difficult; restless; involuntary discharge of urine; answers questions rationally.

14th.—Restless; does not sleep. Answers questions rationally when spoken to, but immediately afterwards the mind wanders, and he talks incoherently.

15th.—Complains of pain in legs; endeavors to get out of bed; has involuntary discharges of fæces and urine; constantly whispering.

16th.—Head drawn back at nearly right angles with body.

18th.—Contraction of the muscles of the back and neck; less restless; attempts to get out of bed every few minutes; deglutition performed with less difficulty; respiration hurried; mind rational. On inhaling chloroform, his head could be moved forward on a line with his body, but respiration was arrested.

19th.—Rested quite well for two hours. Has less contraction of the muscles of the neck; called for the urinal; no involuntary discharges. During the day he got worse, and became very restless. Pulse 160; respiration 60. Answers questions rationally; deglutition difficult; takes but little nourishment, and grinds his teeth constantly.

20th.—Rested well until midnight. He then became very restless, and continued so until two hours previous to his death, which occurred at 5 o'clock, A.M.

Autopsy, seven hours after death. Vessels of scalp quite empty. On removing calvaria, found vessels of dura mater highly injected. Arachnoid cavity contained one ounce and a half of serum. Pia mater highly injected. Arachnoid covered with lymph; in spots, with pus. A large amount of pus was deposited on the medulla oblongata and pons Varolii. Gray and white substance of brain congested and softened. Lateral ventricles each contained half an ounce of sero-purulent fluid. Choroid plexus injected. Medulla oblongata, pons Varolii, and cerebellum congested and softened Whole inferior surface of medulla oblongata and pons Varolii, as far forwards as the pituitary body, covered with lymph and pus. On opening the spinal cord, found meninges highly injected, and containing quite an amount of sero-purulent fluid. Arachnoid membrane covered with considerable lymph and pus from the seventh cervical vertebra to the sacrum. The cervical portion of the spinal cord free from lymph and pus, although the meninges were very much injected. The largest amount of pus was found in the lumbar region. On opening the thoracic and abdominal cavities, found both lungs considerably congested, and the mucous membrane of the stomach quite dark and softened.

Case II.—James F. Johnson, Co. H, 13th Ill. Cavalry, admitted April 13th; died April 17th. Quite youthful in appearance, probably not more than fifteen years of age. Has a small and delicate frame. Had been puny and quite unwell for a month. When admitted into hospital, he was in a state of complete collapse; insensible; pulse small and frequent. On inquiry, it was ascertained that he had been sick in quarters two days, and that, on the day previous to the attack, he had eaten one can of strawberries, thirty-five cents worth of apples, and a box of sardines. The following evening he had spasms, vomited freely, and threw up with the ingesta five large lumbrici. He was treated in quarters for two days by the regimental surgeon, who gave him active cathartics. During this time he was delirious, and had occasional spasms. When admitted to hospital, he had contraction of the muscles of the back and neck, extreme sensibility of the surface, and constant delirium. He continued to decline until April 17th, when death ensued.

Autopsy.—On removing calvaria, found dura mater highly injected. Arachnoid cavity contained half an ounce of serum. Arachnoid covered with lymph and pus, which followed the course of the large cerebral veins and sulci. Gray and white substance of brain congested and softened. Right and left ventricles contained half an ounce of sero-purulent fluid. Choroid plexus highly injected, and covered with lymph and pus. Third and fourth ventricles each contained half a drachm of sero-purulent fluid. Medulla oblongata, pons Varolii and cerebellum congested, softened and covered with lymph and pus; the largest amount found in the lumbar region. On laying open the thoracic and abdominal cavities, found old and firm adhesions, covering whole of right and left pleural surfaces. Both lungs somewhat congested. Found nineteen large lumbrici in stomach and large and small intestines.

Case III.—Geo. W. Basinger, Co. F, 12th Mo. Cav., admitted to Hospital March 19th, having had a chill the day previous. When admitted, complained of pain between shoulders, which continued to increase in severity until the 21st, when he was taken with a severe congestive chill or collapse, and soon became insensible. The muscles of the back and neck spasmodically contracted. This period of collapse lasted three days; the surface cold, pulse small, frequent and thread-like. Deglutition was difficult, and there was involuntary discharge of fæces and urine. On the third day after collapse, reaction began to take place; warmth returned to the surface, the pulse became fuller and slower, he became conscious, and complained of pain in head and back. At this time the entire surface of the body, with the exception of the arms and face, was extremely sensitive, and could not be touched without producing pain. From this time he had a fever of a typho-malarial type, which lasted for three weeks, without any material change except a gradual improvement. At the present time, April 20th, he is convalescent, and is in a fair way for recovery. He has weakness of the back, with slight paralytic symptoms affecting the lower extremities, but not to such an extent as to prevent him from walking about the wards.

Treatment.—In the first two cases given above, the treatment was mainly by active cathartics in the early stage,.with blisters to the nape of the neck, and, in the case of Allen, inhalation of chloroform. The last case was treated with stimulants and tonics, quinine and capsicum, which produced decidedly beneficial effects.

General Observations.—There has been a good opportunity to observe the symptoms and progress of this fatal malady, as it has appeared at this post, and I have watched it with a good deal of interest and considerable care. In what respects, if any, it differs from the same disease in other localities, I am unable to state, having never seen or treated any cases of it elsewhere. It is my opinion that local miasmatic influences, if not its sole originating cause, have had much to do in producing it. It is unquestionably, I think, of an asthenic type, and I believe that the same opinion is entertained by the surgeons on duty at this post who have had the most experience in treating it. At first, surgeons were inclined to adopt active antiphlogistic remedies, but lack of success, and more mature reflection, have induced most of them to abandon such remedies, and to depend upon stimulants, tonics, iodide of potassium and opium, together with cups, sinapisms and blisters to the spine. Opium has certainly exerted a good influence in controlling delirium. I have been led to believe that the administration of quinine, freely given in the early stages of the disease, prior to the period of collapse, will in very many instances arrest it. Whether quinine exerts a specific influence over the disease, or merely removes one of its predisposing causes—viz., malaria—I am unable to determine, as my experience in treating it has been confined to cases occurring in this locality, in which malaria abounds.

St. Louis, Mo., April 20th, 1864.

OUR NATIVE MATERIA MEDICA.

[Concluded from page 302.]

THE class of Lenitives is abundantly represented in our native materia medica. Whether we desire diluents, emollients, or demulcents, we have a large variety to select from. Perhaps a good substitute for gums Arabic and tragacanth might be found in the so-called British gum, or roasted starch. Collodion, too, would be missed by many, but other vegetable fibres, as fibrilia, might prove equal to cotton for its manufacture. It would seem, at first thought, that olive oil had become almost a necessity; but we may become better satisfied with our own productions, on learning that a large proportion of what we import, under the name of Florence oil, Bordeaux oil, &c., has been previously exported from Boston or New York under the more humble designation of lard oil. It is probable that, under the pressure of necessity, we could perform the processes of clarification nearly as well as the French.

In the list of Astringents we find but few which we are not in the habit of importing, for commercial reasons. Of the mineral astringents, in particular, we have hitherto drawn but a small portion of our supply from native sources. Yet, if commerce were impeded, we see that an adequate supply of every one of them is to be found in New England. The leading vegetable astringent, tannic acid, we usually manufacture from imported nutgalls. It can probably be made, however, at a somewhat increased expense, from oak bark or native galls. Catechu, kino and krameria differ from any indigenous astringent, in containing a form of tannic acid, which is not convertible into gallic acid. Whether this is an important or advantageous difference, is yet to be learned. The majority of the important mineral astringents require for their manufacture sulphuric acid, which, in this country, is usually made from sulphur by a process of combustion. Free sulphur is of rare occurrence in New England. A single locality, at Hinsdale, Mass., is the only spot Prof. Hitchcock can refer to where it is found, even in small quantities. The original process for the manufacture of sulphuric acid, which is said to be still carried on in some parts of Germany, was by the dry distillation of sulphate of iron, whence its popular name, oil of vitriol. Fortunately, sulphate of iron, and the sulphide, from which the salt can be made, occur abundantly in New England. A large deposit of both exists near Worcester, Mass.

The Mineral Irritants we could supply, with hardly an important exception. All the Vegetable Irritants in common use are also either native or easily cultivated. Dr. Harris states that in certain localities of Massachusetts several species of the cantharis abound, whose vesicating powers are hardly inferior to the Spanish fly. If special attention were paid to their food, habits, &c., we could, no doubt, soon obtain an ample supply.

Of the Specific Tonics all are native, with the single, but important exception of cinchona. This it is quite hopeless to attempt to cultivate, and its active principles we cannot, as yet, expect to imitate. In forming our idea of the real value of this drug in New England practice, it must not be forgotten that this region is almost entirely free from diseases of malarial origin. The specific properties of quinia are therefore very rarely called for here, except in cases of disease contracted further South or West, or in foreign countries. For such cases we have good substitutes for quinia in the alkaloids of cornus Florida and salix. We administer quinia, in the vast majority of cases, however, simply as a tonic; and in this use, as in the other, its value is very great. But, since we possess many native tonics, such as prunus virginiana, of decided efficacy, it seems just to rank quinia as a convenient rather than an essential constituent of our New England Pharmacopœia.

Of the Simple Bitter Tonics in common use not one is native. Quassia, gentian and colombo are at present cheaper and perhaps more convenient than coptis and the other native bitters mentioned by Dr. Bigelow. It is improbable, however, that, therapeutically, the imported drugs are at all superior. Of the Stimulant Tonics our native supply is bountiful.

A prominent position in the class of Tonic and Aromatic Stimulants is held by the group of spices, which are nearly all imported from the tropics. Capsicum we cultivate, and for ginger we can use asarum, our wild ginger. The other spices may fairly be considered pharmaceutical luxuries. The majority of the rest of the class are only too abundant; supplying, as they do, the materials for the herb teas with which our rural population are so much inclined to drench themselves on the slightest provocation.

We possess all of the articles on the list of General Stimulants, except arnica. This is used mostly as a vulnerary, a little, if at all, as an internal remedy. Though convenient and useful, we can dispense with it without serious disadvantage.

We already furnish our own supplies of the greater number of the drugs classed by Stillé as Narcotics. It unfortunately happens that one of the two exceptions, opium, is really indispensable; the other, cannabis Indica, we can do without; for, though undoubtedly possessing valuable therapeutical powers, it is, as yet, comparatively little known and used in the profession. The plant producing the officinal extract grows readily in many countries, and differs little, botanically, from cannabis sativa, the source of our hemp. The peculiar resinous substance, in which reside the properties of the drug, is not found in the plant, when growing outside of certain limited regions in Asia. So we may dismiss the hope of adding this to the list of our native productions. But opium we can produce, without doubt. Our supplies of the leaves, flowers and capsules of the poppy are of home growth and good quality. It is well known that several attempts to cultivate the plant for opium have succeeded very well in England—one of the experiments proving quite lucrative. There is no apparent reason why the same success should not be attained in our Southern New England States. Certainly the present would seem to be a favorable time for making the experiment, while opium commands so high a price.

From the group of Antispasmodics would be taken assafœtida and camphor, which are extensively used, particularly in domestic practice. There seem to be no native drugs at all adapted to fill their places, though quite a long list would still remain to us.

In the next class, that of Spinants, our native supplies are very deficient. In fact, ergot and toxicodendron seem to be our only resources in this department of therapeutics.

Of the important family of Sedatives, general, arterial and nervous, there is hardly a single member which we need to seek beyond the boundaries of New England. The few exceptions appear absolutely insignificant in comparison with those we possess.

Of Errhines our supply is abundant, though the variety is not great. Besides those mentioned in the list, sanguinaria, a widely-diffused native plant, is much used.

Ipecac is the only really important Emetic, with which we cannot supply ourselves, at least, to a considerable extent. At the same time it is so extensively used, that a substitute should be found, if possible. This we have in our native poke, phytolacca decandra, of which Dr. Bigelow writes as follows:—"In its medicinal properties the root approaches nearer to ipecacuanha, than any other American vegetable I have hitherto examined. From abundant experience, the result of many trials made in dispensary practice, I am satisfied that, when properly prepared, it operates in the same doses, and with the same certainty, as the South American emetic." Dr. George Hayward also reported quite favorably of the drug, after considerable experience. Prof. Clarke, however, regards phytolacca as uncertain in its action, and prefers gillenia, which also resembles ipecac closely. With the two we should be well supplied. The other native vegetable emetics are of decidedly less value. Tartar emetic is noted in the list as being of native origin. This statement needs considerable qualification, for ores of antimony have, as yet, been found in small quantities in New England, the principal deposits being at Carmel, Me., and Cornish, N. H. Even granting that these sources are sufficient for at least a temporary supply of the metallic base, we meet with another difficulty in the fact that tartaric acid is not yet produced in New England, owing to the sweet character of our native wines. The Catawba wines of Ohio are much more tart, and give quite a copious deposit of the crude bi-tartrate of potassa. Perhaps if the same grapes were sufficiently cultivated here, the character of our native wines might alter. Under existing circumstances we should have to use the antimonial in some other form, for instance, the teroxide.

The use of Cathartic medicines is so extensive in this part of the country, that the words purge and physic have become popularly synonymous. Perhaps the diminution of the supply of the more active drugs of this class, such as a blockade of our ports would cause, might really prove a benefit. Senna, rhubarb, colocynth, jalap, scammony, gamboge, aloes and Croton oil would all be cut off. But not a few would be left, which are already well known; while for senna we should have cassia marylandica; for rhubarb, juglans, called by Prof. Clarke the American rhubarb; and for jalap, podophyllin.

Owing probably to the prevalence of pulmonary complaints in this climate, the list of Expectorants has been swelled to a needless, and perhaps troublesome length. A judicious curtailment of the Materia Medica might be of advantage in this, as in many other classes of remedies. Unfortunately the pruning proposed in this essay, cuts away some of the most important branches. Copaiba, the balsams, and squill, would be selected as the first to be retained in an abridged Pharmacopœia, and yet they are all of foreign production. It will be seen under "Diuretics," that a possibility exists of introducing the culture of squill. At the worst, we have senega, and one other agent of decided value, though less used by the profession, viz., asclepias tuberosa, of whose efficacy Dr. Bigelow speaks in the highest terms.

Of native Diaphoretics our supply is almost endless. A number of the herbs classed as aromatics are largely and successfully used in domestic practice to produce diaphoresis. With the profession, the most frequent prescription for this purpose is probably Dover's powder. For the ipecac in this compound, phytolacca has been occasionally substituted with good success. Gillenia might also be used.

Although almost all of the class of Diuretics are, or may be, obtained from native sources, yet a few very important ones come from abroad. Squill is considered by many as the most useful diuretic and expectorant. On account of this double application, it would be very desirable to introduce its culture, should there be any prospect of our being cut off from foreign supplies. We raise considerable quantities of garlic, a native of the same countries as squill, and closely related to it botanically. *A priori*, therefore, we might expect some degree of success in the cultivation of the latter. Certainly it seems desirable that the trial should be made, as it would call for but a small expenditure of time, labor or money.

The necessary deprivation of copaiba and cubebs would be severely felt, both by physicians and patients, so extensive is their employment in gonorrhœa. We probably possess a drug of similar powers, viz., gelseminum. This has been much used in gonorrhœa in some parts of the country, and with remarkable success, judging from published reports of cases. It is a native of the Southern States, and probably would not thrive in our colder climate. There seems to be some doubt as to the success met with in the cultivation of colchicum in this climate. Stillé and Wood both state that small supplies of native production reach the market, but neither speaks in positive terms of the efficacy of the samples, as compared with that obtained from Europe.

Ergot, savin and tansy are probably the most important of the drugs, which have a special direct effect upon the uterus, and they are all native.

The list of Anthelmintics would be considerably reduced, but an ample supply would remain, including ol. terebinthinæ and cucurbita pepo.

All of the Alteratives, with one important exception, mercury, can be abundantly produced within our own borders. A blockade would materially interfere with our fisheries, but the fishing carried on directly off our coasts would furnish us with enough cod-liver oil to meet our requirements. In place of the fish oils, that from linseed has been largely experimented with at the West. At one time it was believed by some that the vegetable oil was as efficacious as the animal. I am unable to learn of any similar extensive trials in this vicinity. Fusel oil, or amylic alcohol, also, which we can produce in any quantity, is regarded in some quarters as equal, if not superior, to fish oil.

In this vicinity it is now seldom that we see single doses of mercurials prescribed—a course of mercury almost never, except in syphilis. Perhaps in time, it may be deprived of even its present claims as a specific in that disease, by the persevering attacks of Bennett of Edinburgh, and others. We have already seen its use here almost abandoned in iritis, as the result of Dr. Williams's researches. This is not the place, however, to discuss the therapeutic value of mercury. The simple fact remains that not a particle of it has thus far been found in New England.

Of all these classes, we find only one (Spinants) in which we are absolutely deficient; in scarcely another are we really poor.

But let us look at the subject from another stand-point. Dr. Jas. Jackson, in "Another Letter to Young Physicians," has given us the precious results of his extensive and careful research into the practical value of drugs. He specifies those on which he thinks he has most reason to rely. He gives first a list of six; viz., antimony, mercury, opium, cinchona, arsenic and iron. Of these, we have two in abundance: one in small quantities; one could be cultivated to the necessary extent; and the remaining two are and must continue to be imported. A supplementary list of twenty is then given, of which only four or five are necessarily supplied from abroad. Even of these, some might be replaced by native substitutes of almost identical properties. A more modern observer, Trousseau, omits antimony and arsenic from Dr. Jackson's list of six, and adds belladonna. Of the five thus selected, we could supply ourselves with three.

Theoretically, then, New England may be said to possess a Materia Medica sufficiently copious both in quantity and variety. There is little doubt that, with ten, or even five years of preparation, the treatment of disease might be, to the full, as efficient and successful as now, and yet not a drug should be brought from beyond the boundaries of the six New England States. One reservation must here be made with regard to mercury, whose specific properties in syphilis may be great, though stoutly denied by some; and from its loss might result more fearful ravages of that foul disease, than we are accustomed to see.

Moreover, in our patriotic pride in the resources of this part of our country, we must not forget that a sudden war with powerful neighbors would find us fearfully unprepared in very important particulars. Let it be our welcome duty, as medical men, to render our country and our state, as far as may be, independent even of the drugs of foreign nations.

TWO CASES IN WHICH SUDDEN DEATH WAS CAUSED BY FATTY DEGENERATION OF THE HEART.

By Alfred Hosmer, M.D., of Watertown, Mass.

[Communicated for the Boston Med. and Surg. Journal.]

The following cases are not reported because it is thought any additional evidence is needed to prove that fatty degeneration of the heart is an adequate cause of sudden death, for that has become a well authenticated fact in pathology. But it may not be amiss, by repeated illustration, to call the attention of the profession at large to a morbid condition which is distinctly obvious when sought for in a proper manner, but which, with the ordinary means and modes of investigation, is not unlikely to be overlooked. The condition alluded to is interesting, like any discovery which has substituted light for darkness, and replaced obscurity by certainty; and important, because it undoubtedly classifies and explains a certain number of cases the nature of which was formerly imperfectly understood, if not completely misapprehended.

In this connection it may not be out of place to quote from Paget, who says of this affection, "it often introduces unexpected dangers into the ordinary practice of surgery; it is, I believe, not rarely the cause of sudden death after operations." His suggestion that it may be a source of serious danger in anæsthesia, deserves a careful consideration, especially by those who still profess an inexplicable faith in chloroform.

Mrs. H., aged about 42, apparently in robust health, somewhat corpulent, had led a life of unusual activity and industry, although always in comfortable circumstances. The whole history of her previous illness is told by saying that, during the last few years of her life, she repeatedly suffered from attacks of severe pain, produced by gall-stones. On the evening of April 18, 1863, she was confined, her labor being in every respect natural, and not very long. The case progressed satisfactorily until the evening of the ninth day, when the house took fire. The patient displayed her usual perfect self-control, betraying no fright or agitation, rose from her bed, walked down stairs and out of the house. A short distance from the door, she was taken up and carried to the house of a near neighbor, where I saw her soon after. Convalescence seemed not in the least to be interrupted by what had happened, and on the fourteenth day she returned to her own house. The twenty-second day she went to ride, with apparent benefit. About this time, as I afterwards learned, she complained somewhat of a general feeling of lassitude, and want of her accustomed energy. The twenty-third day she had the first attack of palpitation, which produced great discomfort for the time being, but soon ceased. The following day she rode to Boston, and made considerable effort without inconvenience. The twenty-fifth day the palpitation returned with increased violence, but subsided in the course of a few hours. I was sent for the twenty-sixth day in the evening, and found her suffering very much from the condition of the heart, the action of which, though regular, was extremely rapid, the pulse numbering upwards of 130. The impulse was rather feeble, but both sounds were distinctly audible, and unmodified by any bellows murmur. The dyspnœa was considerable. The next morning I found an improved, but not a natural state of things. The following (twenty-eighth) day she considered herself much better, and, of her own accord, took a ride, in the course of which I met her. That night at eleven o'clock she was compelled by dyspnœa to rise from her bed, and to pass a very uncomfortable night in a chair. After daylight, however, she went to bed, and with her head and shoulders raised high upon pillows, managed to get some refreshing sleep. She then rose and took some breakfast. Between ten and eleven o'clock, violent palpitation and great dyspnœa came on suddenly, and continued to increase rapidly for the space of fifteen minutes, when the patient died.

An autopsy was made six hours *post mortem*. In the gross appearances of the organs there was nothing found which would explain the fatal termination. The kidneys, on section, emitted a peculiarly strong, disagreeable urinous odor.

Upon examining the muscular tissue of the heart under the microscope, a piece being taken from the wall of the left ventricle, I found that while in some places the striated appearance could be seen without difficulty, the striæ were for the most part either very faintly indicated or completely obliterated. Within the fibrillæ I found the unmistakable molecules of fat, but they were not remarkably numerous. In the tissue of the kidneys I also found molecules of fat quite as abundant as in that of the heart.

The subject of the second case was Miss Sarah A. Leonard, the circumstances of whose death at the Massasoit House in Springfield, Mass., were published at length in the newspapers. Miss L. could hardly be called fleshy or corpulent, but was very far from being of a spare habit; her age was 42. I am informed by the physician under whose care she was at that time, that four years since, she was suffering greatly from palpitation and dyspnœa; that at times slight exertion would so exaggerate her symptoms that her family thought she must die immediately. To what extent she had been afflicted with cardiac symptoms since the period named, I do not know, but have good reason to suppose that she was not entirely free from them.

She was found dead in her room, April 20th, 1864; the autopsy was made three days after. The three cavities were carefully examined, but without any satisfactory result derived from gross appearances. To justify her character against any suspicion of suicide, and to eliminate entirely all question of poison, her friends caused the contents of the stomach to be examined by a professional chemist, whose report established a negative, as was expected.

I examined with the microscope various portions of the walls of the two ventricles, and everywhere found the same appearances. The parallel outlines of the fibrillæ were easily made out, but the striæ had everywhere disappeared completely. Within the fibrillæ molecules of fat almost innumerable were seen, while external to them globules of fat existed in great abundance.

ON THE DECORTICATION OF CEREALS.

What is understood by the decortication of grain? It is a system by which the exterior envelope is taken off, so that there remains only the kernel of flour; in other words, decortication does to the grain what most persons do to fine fruit before eating, namely, they peel it, in order that the bitterness or coarseness of the skin may not diminish the flavor and goodness of that which is within.

Thus, decorticated grain is without the bitterness which the skin communicates, whether it be for making bread or for distillation; in fact, any one who has not tasted bread made from decorticated corn does not know the natural taste of wheat flour.

Corn is the most valuable of the farinaceous foods of man, and it is important to know if the flour of old corn can be improved by decortication. Look, then, to the structure of a grain of corn, beginning from the outside. We find a gummy and resinous pellicle in order to protect the grain, at the same time not stopping the power of absorption, and it is easy to understand that this pellicle easily gets discolored and charged with dust that must impart a bad taste; after this pellicle there is a thinner skin, distilling the air and nourishing the kernel, as through a thin veil. There is a third envelope, formed of impalpable dust, which acts as a sponge, absorbing the damp and stopping putrefaction, and giving a longer life to the kernel. These three envelopes form the brans, and under these three there is a thin skin, called in science "testa." This skin sticks to the floury kernel, and surrounds it like a cuirass, and the object of the decorticator is to take off this cuirass, and strip it completely without injuring it.

After the testa we come to the germ of the grain, which surrounds the kernel like a crown, enlarging it towards the embryo. This is the flour *par excellence.* Then come the particles the most glutinous, then the centre.

One can understand that in completely taking off the three brans of old wheat, or of Egyptian wheat, before grinding, the flour will necessarily be better. If the three brans be preserved separately, the inner one will be found in the form of a fine, black, bitter, bad-smelling dust.

What advantages, then, are to be obtained by decortication? The answer is, 10 per cent. increase in quantity of flour (at least upon wheat), and from 12 to 15 per cent. in barley and oats, and at the same time a finer color and a better taste. The next question which arises is, "Ought the grinding of decorticated grain to be done in the same manner as undecorticated grain?" The answer is, "No." Having shown that the finest flour for taste and nourishment adheres to the skin, the grain must be pulverized to detach this flour from its envelope. You must then grind as fine as possible, so as not to heat the flour, then dress through a dressing machine, of which the coarsest silk will not let through more than the third or fourth degree of fineness—thus you will obtain 80 per cent. of the weight of corn; then you will either regrind or redress the remainder, so as to have 90 parts of flour from 100 parts of the corn decorticated. The 90 parts of flour will make a delicious and nourishing bread.

As to decortication in a hygienic point of view, the flour of decorticated corn at 90 per cent. is more nutritious than ordinarily ground corn at 78 or 80. All the chemists (in France) who have analyzed and compared flour from decorticated and undecorticated corn, find 5 and 6 per cent. more gluten in the former than in the latter. The formation of the grain shows us that it must be so. In grinding undecorticated grain, to prevent the third bran from spoiling the color of the flour, the stones are put so far apart that a large portion of the flour is suffered to escape in the brans, and we have seen that the exterior flour is richest in gluten and in phosphoric principles.

As in the ordinary millering, the greater part of this excellent flour is left in the bran, so flour from undecorticated corn extracting 78 to 80 per cent. of the weight of the corn, is inferior in nourishment and in flavor to the flour of decorticated corn extracting 90 per cent. of the natural weight of the corn.

As regards the several qualities of bread, the decortication does not affect the different qualities that exist in the flour; the compartments of the dressing machine divide it, and one can always have bread more or less white according as the first, second, or third flours are more or less mixed. The quality of the first will be incomparable, but what is gained in whiteness is lost in taste and nourishment. Thus, we say, the first flour will only be used for pastry and very fine bread—it will be excluded from the table where bread is the principal food—and will be only used at the table of the luxuriuus.

It is better to make a quality with all flours united, making a wholesome and well-flavored bread; and experience has proved that young people, more especially, fed with this bread will have a strong and vigorous constitution, instead of the lymphatic blood produced by the white and tasteless bread in common use.

In order to obtain this complete decortication, the principle adopted by M. Poissant (the pioneer of this system) is that of causing a continuous rubbing of grain against grain by means of a well-devised machine—the result of many years' toil, but which it is hardly possible to describe here. Suffice it to say that it consists of two sets of revolving blades, driven at 300 or 400 revolutions per minute, which causes the grains to come into contact with each other in such a manner as to create a speedy expansion and separation of the skin, and as each skin is loosened, so is it driven off at stated and fixed periods by an arrangement of fanning.

It is necessary to observe that the grain, previous to decorticating, is immersed for a second or two in cold water, and allowed to drain for four or five minutes before it is put into the hopper of the machine. The next step before grinding is to take care that the grain is thoroughly dried, which is easily accomplished by rapid currents of heated air meeting the grain as it passes from the machine, it being observed that the moisture, through its immersion, is exceedingly slight, and altogether superficial.

It is a matter of singular yet great importance to know that corn and other cereals decorticated are not likely to be attacked by that destructive insect the weevil, that is, if the decorticated corn is carefully excluded from sunshine. Thus to preserve decorticated corn, after it is properly dried, it should be put into barrels, or stored in close and air-tight granaries, where it will be found to keep for an indefinite period.

By way of recapitulation it may be stated:—

1st. That decorticated grain will always be profitable to the world, as it incontestably yields 10 to 12 per cent. more flour than ordinary millering.

2d. It can be done in either small or large quantities, and not only produces from 10 to 12 per cent. more flour, but at the same time from 5 to 6 per cent. more glutinous nourishment.

3d. Its non-susceptibility of attack from the weevil, and therefore its fitness for storing against periodical seasons of scarcity.

Lastly. The machines are simple, cheap, lasting, and capable of being worked either by hand or motive power at small cost, and have, in fact, no known drawbacks, except that pollard bran, &c., which is produced by the present method of millering, will no longer be an article of commerce. But, as a set-off, the pellicle which is produced by the new system is found to make an excellent vellum-like paper, which is largely sought after in France by bookbinders.

The above is based partly on personal observation and examination, and partly from written communications from M. Poissant, whose whole life nearly has been devoted to this subject.—C. Davison, C.E., *at the British Association;* from *Am. Drug. Circular.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, MAY 19, 1864.

Annual Report of the Surgeon-General of Massachusetts.—The bulky volume bearing the name of the Report of the Adjutant General of the State of Massachusetts, contains, as usual, the report of the Surgeon-General of the State. This is an important annual record of matters pertaining to the medical staff of our soldiers in the army of the United States, and of what has been done and is now doing by the State for the sanitary welfare of our troops. Every year makes it the more evident that the office of Surgeon-General is a very important auxiliary to the Executive department, and that without it there would be a load of anxiety weighing on the hearts of our people, which would add tenfold to the unavoidable sufferings of the war. The simple fact that a full account is kept by him of the location of all our soldiers, that their friends can always get at his office information of the condition or fate of those in the Government hospitals, is in itself enough to make this office one of immense public benefit. Certain we are that the information which is thus daily given by the faithful incumbent, with that kindly urbanity of manner which is so strikingly characteristic of him, diffuses a sunshine of hope and patience over countless homes, which would otherwise be darkened by gloomy forebodings as to the uncertain fate of those whom they have sent to the war. As may be supposed, the amount of work necessary to keeping up a constant supply of information of such a personal character is very great, and we find that with this and the other matters of the office the amount of business done increases with each year. The Surgeon-General is the agent through whom the friends of sick and wounded soldiers make application to Government for discharges, furloughs and transfers; and the correspondence growing out of this must be enormous. It has also been his duty during the past year to take part in the examination of candidates for the office of surgeon in the colored regiments organized in the State, as well as to pronounce on the physical fitness of drafted men in camp at Long Island. Thus it is very plain that the office of Surgeon-General is far from being a sinecure.

We have in the report before us all the changes that have been made in the Medical Staff of Massachusetts regiments in the field during the past year, with a list of the medical officers in the veteran regiments now organizing. We find, also, kindly tributes to the memory of those members of it who have lost their lives in the service during the year.

Considerable space is given in this report to the subject of the colored regiments, of which the first raised by State authority was recruited in Massachusetts. Of these the Surgeon-General speaks in the most favorable terms. We cannot do better than to quote his own language:—

"As this movement was considered by many who had always been friends of the colored race, as an experiment, whilst by others it was derided and pronounced impracticable, it became a matter of great moment that it should be inaugurated under the most favorable circumstances. Fortunately, your Excellency, it was commenced, carried on and consummated by those who unfalteringly believed in its success, and in the importance of giving this race an opportunity to vindicate their right to freedom by fighting for it.

"There were medical men attached to the staff of our regiments in the field, of large experience and ability, gentlemen by education and social position, who coveted the honor of assisting in the solution of this question; and when the selection of a surgeon was made for the Fifty-Fourth Regiment, he gave to the movement an energetic, zealous and conscientious coöperation worthy of all praise.* The first recruits were sent to Camp Meigs, Readville, in February, 1863; their medical examination was most rigid and thorough, nearly one third of the number offered being peremptorily rejected; as a consequence, a more robust, strong and healthy set of men were never mustered into the service of the United States. Going into camp in the winter and spring months, there was a moderate amount of sickness, principally pneumonia and bronchitis, and there were a few deaths from these diseases. The hospital accommodations were, however, good, and the rations furnished the men were ample and well prepared. From the outset, the regiment showed great interest in drilling, and on guard duty it was always active and vigilant. The barracks, cook-houses and hospital presented a remarkably neat appearance; indeed, the kitchens far surpassed in cleanliness any I have ever seen, and were models of neatness and good order. The cooks, however, had many of them been in similar employments in other places, and had therefore brought some skill to their present responsibility.

"In camp, these soldiers presented a buoyant cheerfulness and hilarity which impressed me with the idea that the monotony of their ordinary duties would not dampen their feelings of contentment, if they were well cared for. On parade, their appearance was marked by great neatness of personal appearance, as concerned dress and the good condition in which their arms and accoutrements were kept. Their habits being imitative, it was natural that they should be punctilious in matters of military etiquette, and such observances as the well-disciplined soldier, in his subordinate position, pays to his superior. And, fortunately for them, they had the teachings of those who were thoroughly imbued with the importance of their trusts, but were gentlemen, as well as good soldiers.

"It was remarked that there was less drunkenness in this regiment than in any other that had ever left Massachusetts, but this might have been owing to the fact that the bounty was not paid them until a day or two previous to their departure; nevertheless, it is my dispassionate and honest conviction that no regiments were ever more amenable to good discipline, or were more decorous and proper in their behavior, than the Fifty-Fourth and Fifty-Fifth Massachusetts Colored Volunteeers.

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* Surgeon Lincoln R. Stone, Second Massachusetts Volunteers, now Surgeon U. S. Vols.

"Probably no prejudice ever vanished more quickly than did the deep-seated one, that these men were capable of no higher mission than that which their long condition of servitude had imposed upon them. * * * * * * * *

"Few regiments have had such a hard introduction to service as this command, and none have borne its hardships more cheerfully or uncomplainingly. Their power to endure fatigue and hardship has been well tested on the battle-field, in the trench, and in other positions where physical endurance was necessary to success. On this point, the opinion of those best able to judge, and whose observations entitle their opinions to great weight, has been that there is no difference between colored and white troops in capacity to become good soldiers.

"For a week after the assault upon Battery Wagner, they were constantly at work, entirely without shelter, many of them wounded, bruised or maimed—yet there was no complaining or murmuring.

"The returns of the surgeon in charge show that there is little difference in their diseases from those which attack the white man, though it is a well-established fact that they are less susceptible to the influences of malaria, and more prone to attacks of pulmonary diseases;—whilst their courage in the field, and powers of endurance in the trench are well established. On the other hand, they seem to be more dependent upon their officers than the white regiments, and are imprudent, thoughtless or careless in matters pertaining to their sanitary condition. In health they are cheerful and hopeful, in disease melancholy and despondent, and do not rally from the grave forms of disease so readily as the white race. These peculiarities may be the result of their long condition of servitude, or the consciousness that they have always been regarded as mentally and physically inferior. Yet the difference between the Fifty-Fourth Massachusetts Colored Volunteers, recruited North, and colored regiments raised South, was very great, and more strongly marked than any characterizing white soldiers as compared with black. The blacks born and recruited South having just emerged from the condition of servitude imposed on them since birth, are far more dependent than the colored regiments recruited North, showing that the further this race has been removed from the depressing influences of slavery, the closer has been their approximation to the whites in their physical development and capacity for becoming enduring soldiers."

The report concludes with a handsome recognition of the indebtedness of the State to the Medical Commission, as follows:—

"If Massachusetts, in the character of her Medical Staff, does not suffer by comparison with other States, it is owing to the high stand taken by this Commission in the examination of candidates, and in other matters pertaining to the usefulness and welfare of the profession, in all of which it has been ably seconded by your Excellency, in whose appointments and promotions no other question has been allowed to enter than that of professional qualification, integrity of character, faithfulness and meritorious service."

Messrs. Editors,—I propose to enlighten the medical profession of the "hub of the Universe" relative to the doings of their brethren in e quiet City of Brotherly Love. Perhaps some among you may still old pleasant remembrances of the "Old University" and "the Jeff.," nd the rectangular streets and plain brick houses "all in a row" of ur "Quaker City."

Medically, we should be rather grave than gay, as we have just lost ree prominent physicians, and we know not when others may fol-w. Dr. Robert P. Thomas, Professor of Materia Medica in the Col-ge of Pharmacy, a learned, courteous and excellent gentleman; Dr. ranklin Bache, Professor of Chemistry in the Jefferson School, and r. John Redman Coxe, formerly so well known by his connection ith the University, have all been swept away within a few weeks. he former, in the prime of life, with the strongest expectations of a ng and useful career, was attacked with "cerebro-spinal meningitis," nd died on the third day. Dr. Bache, though quite advanced in ears, was yet apparently strong; while Dr. Coxe, at the age of 91, ied, worn out—the wheels of life could run no longer.

Our city is healthy, though the "spotted fever," so called, in the bsence of a determined name, still is occasionally seen. It has had a arvest, though by no means confined to the city, as we hear of it lmost everywhere. Of variola and rubeola we have had many cases, ot many fatal; the epidemic of these cutaneous affections has been xtended, though not virulent. Consumption, the great "American isease," is on the increase, and it would be an interesting and valua-le matter to determine how many of these cases occur in the native orn. I believe that two thirds, at least, would be found among our mmigrant population, and particularly the Celtic race.

During the past campaign our schools have been active, and in a egree approached their old proportions in regard to the size of their lasses and the number of their graduates. Perhaps, some day, I may ive a more extended account of them, their Professors, history, &c.

Our military hospitals, though at one time, spite of their ample pro-ortions, filled to overflowing, at present exhibit an array of empty eds. God grant that they may not be much longer required, and may Ie hasten the day when we may once more see the "old flag" wav-ng in every breeze all over the American continent, with "none to olest." Yours, &c., N.

Philadelphia, April, 1864.

Death from Chloroform, in San Francisco.—Mrs. ———, a native f California, of highly nervous temperament, was placed in the ope-ating chair to have a tooth extracted. She was in great dread of the nstruments, and while much excited from this cause, the chloroform as administered, by holding the napkin above and near the nostrils. he had some difficulty in managing the respiration, and, after inhaling t imperfectly a short time, complained that she could not take it, and eized the hand of the operator, removing it from her face. Without sing the chloroform any longer, her hands were held by an assistant, nd the tooth extracted without difficulty. Immediately after the ithdrawal of the forceps from her mouth, her jaws were clenched nd her head thrown back, by spasmodic contraction of the muscles. he breathing was arrested, the face grew livid, and death rapidly en-ued. The immediate cause of death appears to have been apnœa, from the spasmodic closure of the glottis or larynx. The masseter, respiratory and spinal muscles, and also the flexors of the extremities, continued in a state of tonic spasm till relaxed by death. We are satisfied that there was no mismanagement of the chloroform in this case—unless to use it at all be mismanagement. There is quite as much reason to allege that it was not pushed far enough, as that it was pushed too far. Possibly a longer inhalation would have carried the patient safely beyond the range of spasm, and into the tranquil region of anæsthesia. There was no disease of the heart or other organs to discourage the use of the agent.—*San Francisco Med. Press.*

Chronic Ulcers.—Dr. Skey says, "I have treated a large number of these affections, and with success. The more chronic the ulcer, the larger its size, the more aged the subject, the more remarkable is the influence of opium in effecting its cure. Let a case be selected for experiment, of some twenty years duration, which has exhausted the patience of various medical attendants, as well as the remedies employed by them for cure.

"Treat such a case of chronic ulcer, of the largest size, having a pale, flat, bloody base, a high mound lymped around it, covered by healthy integument, the sore pouring out large quantities of watery ichor, saturating every covering. Select such a case occurring in old age: give such a person ten to fifteen drops of tincture of opium night and morning, leave the bowels alone, and observe the base of the sore in five or six days: it will exhibit a number of minute red points, which, daily increasing in number, will rise up in the form and identity of healthy granulations, and cover the entire surface of the ulcer;" and at the same time the base is becoming elevated, the margin becomes depressed, and the process of cicatrization is commenced.

"No injury to the constitution attaches to the use of this remedy, its salutary action upon the ulcer is obtained solely through the healthy influence it exercises upon the constitution."—*London Lancet.*

There are a large number of vacancies existing in the Corps of Surgeons and Assistant Surgeons of Volunteers.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, May 14th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	33	32	65
Ave. mortality of corresponding weeks for ten years, 1853—1863,	34.3	36.7	71.0
Average corrected to increased population - - - -	00	00	78.03
Death of person's above 90 - - - - - - -	0	0	0

Died,—At Concord, N. H., 29th ult., Thomas Chadbourne, M.D., 74.

Deaths in Boston for the week ending Saturday noon, May 14th, 65. Males, 33—Females, 32.—Accident, 2—asphyxia, 1—asthma, 1—congestion of the brain, 1—disease of the brain, 3—inflammation of the brain, 1—bronchitis, 1—cancer, 2—consumption, 11—convulsions, 1—diarrhœa, 1—dropsy, 1—dropsy of the brain, 1—erysipelas, 1—scarlet fever, 4—disease of the heart, 4—infantile disease, 1—congestion of the lungs, 3—inflammation of the lungs, 6—measles, 2—smallpox, 7—teething, 1—wound (pistol), 1—unknown, 8.

Under 5 years of age, 22—between 5 and 20 years, 13—between 20 and 40 years, 12—between 40 and 60 years, 11—above 60 years, 7. Born in the United States, 47—Ireland, 12—other places, 6.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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IS CONSUMPTION EVER CONTAGIOUS, OR COMMUNICATED BY ONE PERSON TO ANOTHER IN ANY MANNER?

[Read before the Boston Society for Medical Observation, April 18th, 1864, and communicated for the Boston Medical and Surgical Journal.]

By Henry I. Bowditch, M.D.

This question may seem one of very little importance, because we all may be of one opinion, viz., in favor of the negative of the proposition. Yet it is one about which I have been interested, in consequence of some cases that have fallen under my notice during the last ten or fifteen years. These cases I shall relate to the Society; but before doing so, let me refer briefly to the views of the medical profession on this topic, historically considered. In all that relates to medical opinion previous to the present century, I shall depend on the learned work by Dr. Young.[*] It would seem, from Dr. Young's statements, that all the chief authors who, previously to the last quarter of the last century, treated of the subject, were full believers in the contagiousness of consumption. It is also well known, that public opinion, which is always the reflection of a preceding medical opinion, sustained that view, at least in the southern portions of Europe. The Italians, until a very recent date, have had certain quarantine and other regulations relative to those dying of this disease, as are common now in smallpox cases. Aristotle, according to Dr. Mason Good, states that this belief in the contagiousness of the disease was common among the Greeks. Galen regarded it as unwise to pass even a day with a consumptive. Morton[†], 1619, Riverius,[‡] 1656, and above all, a century later, the learned and sagacious Morgagni,[§] 1761, would not dissect a phthisical patient's body because of the risk he thought would be run of taking the disease. Dr. Withering,* in 1775, claims that it is certainly infectious.

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[*] Practical and Historical Treatise on Consumptive Diseases, deduced from Original Observations and collected from Authors of all Ages. By Thomas Young, M.D., F.R.S., London, 1815.

[†] Morton. Phthisiologia, London, 1619, p. 185.

[‡] Riverius. Opera Medica, Fol. Geneva, 1728, d. 1656, &c.

[§] De Causis et Sedibus Morborum, Fol. Venice, 1761, Ex. xix., 53—xlix., 15.

Subsequently to this long period of almost entire faith in the contagiousness of the disease, we have a period of doubt and of questioning upon the subject for about twenty-five or thirty years.

Dr. Cullen,† in 1777, dares not assert that it is never contagious, especially in warm climates, but he had never seen a case, in which it was decidedly communicated by one individual to another.

The Edinburgh professor evidently doubted the commonly received opinion, but was unwilling to take a bold stand against the idea of contagiousness, as those of the same school did in 1794 (i. e. seventeen years afterwards), who not only opposed the notion, but presented strong cases against it.‡

Dr. T. Reid,§ of London, 1782, allows that, in extreme cases, it may be slightly contagious, and young persons should not sleep in the same room with a phthisical patient.

During the same year, 1782, Bursieri‖ says the Colleges of Physicians of Tuscany had declared their disbelief in its contagiousness; but this did not prevent government from taking precautions against it.

Emale,¶ 1783, thinks it so contagious that it is dangerous to draw milk from the breasts of a woman, as recommended by Chevillard and others, for the cure of consumption, for fear of the disease being given to the nurse.

Vogel,** 1785, is quite convinced of its contagiousness.

Darwin,†† 1793, is a complete believer of its contagiousness, in *persons nearly allied.*

By these quotations—coupled with the fact that I find none, during the same period, decidedly opposed to the proposition—I think I have given some proof—first, of the very general consent to the proposition of the contagious nature of consumption, until the commencement of the last quarter of the last century; second, that from that time until about 1800, there was evidently great indecision. From 1800, with some very few exceptions, Medical Opinion and Public Opinion have been gradually becoming settled in opposition to the theory of contagion. No one will deny that Morgagni showed great weakness in being unwilling to dissect the body of a phthisical patient. In fact, no one would hesitate to regard the disease, as seen now, wholly innocuous to the degree feared by the great pathologist of the last century.

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* Account of the Foxglove. Birmingham, 1785.

† First Lines of the Practice of Physic, Edinb. 1777.

‡ Dr. Young. Supra, p. 330.

§ Essay on Nature and Cure of Phthisis Pulmonalis. Lond. 1782.

‖ J. B. Bursieri. Institutiones Medicinæ Practicæ, 4 v. Venice, 1782. English by Brown. 4 v. Edinb. 1800.

¶ Emale. Journal Médicale, lxiii. 1785.

** S. C. Vogel. Handbuch der Practischen Arzney-Wissenshaft. 1785.

†† T. Beddoes to E. Darwin, on a New Method of treating Consumption.

I may here remark that one wonders at the fears of Morgagni, when he remembers that Fabricius Hildanus describes several examinations of bodies of persons dying of consumption, and this more than a century before Morgagni lived.

The following resumé of the authorities on the subject since 1793 up to the present time, will include my third period, or that of nearly utter denial of the idea of contagion in connection with consumption.

Only two writers of note and of undoubtedly strong minds, and these Americans, can be found to defend the proposition of contagiousness. These two writers are nearly at the two extremities of the period now under consideration, viz.: Benjamin Rush,[*] 1793, and Drake,[†] 1854—about a half a century later. Dr. Rush is fully convinced of the contagiousness of the disease, and quotes what I cannot but think rather apocryphal cases sustaining his views. Dr. Drake, without taking the affirmative decidedly, nevertheless evidently leans very strongly towards it; quotes facts, and argues analogically that such a proposition is quite in accordance with the fitness of things.

Meanwhile a certain number, especially in the earlier part of the century, are in doubt. Dr. Heberden,[‡] for example, 1802, has not been able to make up a decided opinion upon the subject; but he had seen several cases in which he could not find any more plausible reason than contagion, from the patient having been constantly in attendance on another, and even sleeping in the same room. The very same year, Haygarth[§] and Darwin[‖] decided against the proposition.

Wilson,[¶] 1803, says it is rarely attributable to contagion, but it is wisest to avoid sleeping with a consumptive patient. Little is said by authors upon the subject till 1809; and from that period up to the present time, authorities may, with the exception of the two first (viz., Rush and Drake), be classed either as being in doubt, and, at times, very decided opposition to the idea of contagion; or they ignore the whole subject, and thus virtually seem to consider it beneath their notice.

In the first class we find Portal,[**] 1809; Laennec,[††] 1818; Cowan,[‡‡] 1835; Davies,[§§] 1835; Ancel,[‖‖] 1852; Watson[¶¶], 1857; and

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[*] Medical Inquiries, 1793.

[†] Diseases of the Interior Valley of North America. 1854, Vol. 2.

[‡] Commentarii de Morborum historia et curatione. Lond. 1802.

[§] Haygarth. Young, p. 395.

[‖] T. Beddoes. Hygeia, or Essays Moral and Physical. Bristol, 1802.

[¶] A. P. Wilson. Treatise on Febrile Diseases, 1803.

[**] Portal. Observations sur la Nature et le Traitment de la Pleuro-Pneumonie. Paris, 1808.

[††] Laennec. L'Auscultation Médiate. Paris, 1818.

[‡‡] Cowan. Translation of Louis on Phthisis. London, 1835.

[§§] T. Davies. Lectures on Diseases of the Lungs and Heart. Lond. 1835.

[‖‖] H. Ancel. Treatise on Tuberculosis, the Constitutional Origin of Consumption and Scrofula. Lond. 1852.

[¶¶] Thomas Watson. Lectures on the Principles and Practice of Physic. London, 1857.

Cotton,[*] 1858. All these writers actually oppose the notion. Dr. Watson rather dogmatically would settle the question by declaring that "a *diathesis* cannot be contagious."

In the second class are found the following well-known authors, most of whom have written special treatises on tuberculosis, and some of them have gone quite elaborately into the causes of consumption. Louis,[†] 1825; C. J. B. Williams,[‡] 1834; Stokes.[§] 1843; Blakiston;[‖] 1848; Copland;[¶] Bennett,[**] 1858; Lawson,[††] 1861; Todd,[‡‡] 1861.

From these quotations it is evident that, at the present time, we may say that Medical and Public Opinion are almost the exact reverse of what they were previously to the middle of the last century. My own doubts have disappeared under the close examination of my own cases, and of those reported by others. Nevertheless, I should not agree with the extremes of either party, but should hold, that while there is no positive proof of the real contagiousness of consumption, it would be very unwise to deny that some cases do arise, in which a close attendance upon and devotion to persons affected with phthisis is the prominent exciting cause of tuberculous disease of the lungs, in persons apparently healthy.

Similar views are held by others. In proof, I quote as follows: John Hogg,[§§] 1860, remarks it is difficult to say if contagion can be fairly classed among the causes of consumption; but, he adds, it would be the *acmé* of imprudence to place a young person, not perhaps in the best of health herself, in close attendance on or near another. To this last expression of opinion I should give my adhesion, but I would not limit the remark to those who are not in good health—for I think our cases bear out the assertion that it is hazardous for even the most healthy to run that risk. A similar opinion is also held by Mons. Gueneau de Mussy,[‖‖] clinical successor to Chomel, in Paris. He declares, 1864, wholly against contagion, as usually understood, but at the same time believes that it is probably transmitted by coition and by very intimate relations with an individual during any of the periods of the disease. At the time of writing he had two cases in the wards of Hotel Dieu. He quotes Andral as coinciding with him. He has observed a trouble in the throat among those who live with the tuberculous. He thinks it more common for consumption to be transmitted from a man to a woman than from a woman to a man.

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[*] R. Payne Cotton. On Consumption, its Nature, &c. London, 1858.

[†] P. C. H. Louis. Sur la Phthisie. Paris, 1825.

[‡] C. J. B. Williams. Physical Signs of Diseases of the Chest. Am. Ed., 1834.

[§] W. Stokes. Diseases of the Chest. 2d Am. Ed., 1844.

[‖] G. Peyton Blakiston. Practical Observations on Diseases of the Chest. London. Am. Edition, 1848.

[¶] Medical Dictionary. Article, Tubercular Consumption.

[**] J. H. Bennett. Clinical Lectures. American Edition. New York, 1858.

[††] L. M. Lawson. Practical Treatise on Pulmonary Consumption. Cincinnati, 1861.

[‡‡] R. B. Todd. Clinical Lectures. London, 1861.

[§§] John Hogg. Practical Observations on the Prevention of Consumption. London, 1860.

[‖‖] Lecons sur les causes et le traitement de la tuberculose pulmonaire. Hotel Dieu, Union Medicale, vol. 4, p. 374, Nov., 1859.

These general statements give a glance, at least, at the three periods of opinion, and the commencement of a fourth, on this subject; viz., 1st, the period of almost undoubting faith—extending from the earliest records of medicine up to 1775, or thereabout; 2d, a short period, of 25 or 30 years, of great and painful doubt; 3d, a time of utter scepticism; and, 4th, perhaps I may add, a modified faith, not coinciding with either the "everlasting Yea," "the centre of indifference," or "everlasting Nay," as Carlyle would express it.

Let me proceed now to the examination of my own cases.

Case I.—A gentleman died Feb. 13, 1858, after two years' illness, with confirmed and undoubted phthisis. I saw him and examined him, and know that he had all the marked rational and physical phenomena of the disease.

The wife consulted me March 4, 1864, with decided signs of phthisis. It appears that her family was usually quite healthy. Parents alive: mother 56 years old, asthmatic; father well, One uncle, by the father's side, had died of consumption. She was an only child, and had always been, up to the time of her husband's illness, in most robust health. In fact, she never "dreamed of being ill," either generally or locally. She was her husband's sole nurse during his year's illness. She slept with him to the last. He complained if she left him. He wanted the warmth of her body to keep off his chills at night. Often her clothing was wet by the moisture from his body. Her parents protested against this course, and warned her of the consequences; but the wish expressed by the husband, her own confidence in her own health, and abandonment of all thought of self for her husband's sake; these considerations overcame all others, and she continued this course until the end of his life. When this time arrived, she found herself wholly worn down, and she had never been well afterwards. She had been much less capable of endurance, and was easily fatigued by comparatively light work. Every spring she had been worse than at other portions of the year. She had had severe cough from the first, with aggravations of it at times, but with only slight sputa. A year since, hæmoptysis occurred—about ʒ i., bright, arterial. She had had more or less pain about the right shoulder; had been able to lie on either side, and had never been seriously prostrated. Her hæmoptysis occurred after the performance of a very difficult piece of music, requiring extra physical exertion and mental attention. She had had at times some dyspnœa; no palpitation, but was easily tired by walking. Her appetite had been fair, with good digestion as its attendant. Menses regular—urine variable, at times very light colored. She had had a series of periods of emaciation, and subsequently some gaining of flesh, but with a gradual loss of 25 pounds—having fallen from 150 to 125, her present weight. Chills and heat, but no sweating had occurred. This spring, for the first time, she had had hoarseness, and coughed, morning and evening, in paroxysms of about half an hour. She had taken iron and other tonics with benefit, and whiskey not regularly. When I saw her, her countenance was a little pale, not much emaciated, or showing the marks of severe disease. Pulse 88. Tongue clean. The physical signs were as follows:—There was flatness behind right clavicle, and dry crackling to the fourth rib. Voice a little resonant. Flatness also at the top of the right back, and a coarse crackle and slight resonance of voice. Rales, though less marked, even to the base of the lung, and respiratory murmur rather rough even there. Respiration in left lung noisy, somewhat sibilous.

She evidently had tubercles, slowly developing, at the top of the right lung. She considered that this was the culmination of a disease excited by her close attention to her husband during his illness. The facts of the mother's "asthma," and the uncle's death by phthisis, may throw some doubt as to the contact with her husband being the chief cause of the disease in her case. She was hereditarily (so the sceptics will say) tending to phthisical disease—and the over-exertion, &c., broke her down, and made her an easy victim.

I might, in reply, say, that if we take the simple fact of one uncle having died of phthisis as a proof of the *hereditary* disposition, and this in opposition to a most perfectly robust health up to the time of beginning to attend her husband, I cannot but think as much may be said of almost every family. There is scarcely one in this community in which some member, remote it may be, has not had symptoms of phthisis. The "*asthma*" of the mother does not really bear upon the subject of *her phthisis.*

Case II.—Miss E., a young and very healthy-looking woman, I saw in November, 1855. She was the sole attendant of a very sick, tuberculous husband, and slept with him during all the periods of his disease. I was struck with her apparently robust health. A short time after her husband's death she had hæmoptysis. She is now, I believe, alive and married again, but is ill with phthisis, which commenced then, but which makes, however, very slow progress, and does not seem to very *materially* impair her health.

Case III.—In 1855 I attended Mr. H., who was an invalid with pleurisy, and subsequently tubercular disease appeared. He remained for years, fighting against the complaint, and finally died with tubercular pneumothorax. His wife's mother died of phthisis, but she herself was splendid in her kind of robust English form, when her husband fell ill. She *devoted* herself without stint to him, and gradually began to "heck." On examination, physical signs were noticed under the clavicle. The symptoms rapidly increased, and she died before her husband, and was evidently tuberculous.

Those knowing the facts believe, as I believe, that if she had not attended upon him so closely and so long, she might be now alive.

CASE IV.—Miss S. sprung from a family, in which no trace of consumption is known ever to have existed. She was living as a farmer's daughter on a most healthy site, and enjoyed most strong and robust health, when she went to attend an invalid friend, to whom she was most tenderly attached. The friendship was mutual. The invalid sought for and received the closest attention on the part of her young companion. They slept in adjacent rooms at night, and the strong one acted as nurse at all hours, day and night. This attendance commenced in July, 1853, and continued till June, 1854, eleven months, when, at the request of her parents, our patient went home. In August, however, she again spent a week with her friend, and was with her at her death, August 30, 1854. During all this period the invalid did not wish any one else to do aught for her, and her young companion often lifted her when the patient was too feeble to raise herself. During one of these efforts Miss S. felt that she had "strained herself." Ever after she had an uncomfortable "coldness" at the epigastrium and a tendency to chilliness—with, subsequently, in the spring of 1855, some dyspepsia. In the following months, her parents noticed her rather feeble condition, but did not regard her as seriously ill. She was treated as a dyspeptic, and considered herself as such. She had scarlet fever in the spring. In August, 1855, cough set in, i. e. after twelve months' invalidism, and the cough continued uninterruptedly till death. Diarrhœa commenced in March, 1856. She died of phthisis, July 27th, 1856, nearly two years after her friend's decease. I saw her once in the spring of 1856. She then had the signs of anomalous tuberculosis, i. e. crepitus, a pure tubular respiration, and solidification of the lower two thirds of the right lung. She also had had two abscesses under the arms, a few days before my visit.

CASE V.—A gentleman whom I was attending in advanced phthisis, in 1855, assured me that, though one brother had died of phthisis, after some particular exposure, he did not deem himself hereditarily disposed to the disease, as no other case had occurred in the family. This gentleman attended constantly on his wife, who died of phthisis. On my asking whether he thought that attendance had had any influence on his own health, he remarked instantly, as if the idea had previously occurred to him, that the *first* marked paroxysm of coughing he had ever had, and from which he dated all his own ills, was when he was raising his wife in bed and inhaled very deeply her breath. It caused much irritation at the time, and coughing was produced, which continued afterwards.

CASE VI.—Mrs. ——— I saw, October, 1854, aged 30 years. She had been taken suddenly with hæmoptysis. She had had five attacks of the same previously—the first at 18 years of age. Usually they had been of slight duration, and in the interval her health had been excellent. She had slight disease at the top of both lungs. She had been the sole attendant of her husband, who had died about two years previously of phthisis. She had often risen in the night and given him her warm and dry night dress, and moved him to her side of the bed, while she lay down upon the mattress, wet with his sweat, and with only a blanket thrown over it. This was only one of the numerous acts of self-sacrifice which she performed. She told me she knew she was running a risk, but she did not, at that time, care for it. From the time of her husband's death her own health had been materially changed—she had never been as well as before. After contending against the disease ten years, and being at times able to labor much, as superintendent of a large mantilla establishment, she is now in a hopeless state of disease. But she is fully convinced that the close attention to her husband first undermined her health.

CASE VII.—Mrs. ———. This is doubtful as to present diagnosis—but I fear phthisis will result. She has no hereditary tendency, and is a stout, full built woman, and was, till lately, healthy. She attended her husband, who died of phthisis in June last, 1863, after nine months' illness. She was his sole nurse. She slept with him till the last, and scarcely left his room for three or four months preceding his death. She was, of course, fatigued, but went into the country and felt sufficiently well, except she had a liability to headache, to which she was not subject before. In November or December, 1863, she first noticed some dyspnœa; afterwards some palpitation and some sweating at night. These symptoms increased, and she was thought to have phthisis. I found evidence of latent pleuritic effusion filling the whole of the left chest. Tapping was performed Feb. 9, 1864, with relief to the dyspnœa. Between three and four pints of serous fluid was drawn out, but there has been no frank improvement of the local signs. The lung has never freely expanded, but, on the contrary, dulness has always remained, and only the finest crepitus or cough is produced at upper part of lung.

May 14, 1864.—Since this was written, the lung has expanded more, and the fluid that remained has been absorbed. There is, however, still an obscurity of murmur and much less resonance than usual.

CASE VIII.—I saw two sisters in the central part of Massachusetts. I visited them in October, 1863. The parents cough. The grandmother, by the mother's side, had two aunts and a sister die of consumption. Evidently the disease strongly tends to occur in the family. One of the present sisters was dying of advanced tuberculous disease; she had had slight cough for two years, but only broke down two months before I saw her, and apparently from over-exposure, at a celebration on the return of soldiers to her native town, she being chief manager. The whole of left lung had the fine crepitus of recent tubercles, and there were signs of a few at the top of the right. The sister was devoted to her, and declared she would not leave her. She watched with her, and would not take even the slightest precaution. I warned her of danger, but she paid no heed, careless of everything save attention to the sick one.

The physician has written to me, within the past six weeks, that she, too, is beginning to show signs of phthisis, and is, in reality, more rapidly sinking than her sister.

CONCLUSIONS, FROM THESE CASES.

Out of the 8, we have 7 females, viz., 5 wives, 1 sister, 1 female friend; and only 1 male.

They may be divided into three classes, according to their hereditary tendency to phthisis.

1st.	Possibly, phthisical tendencies previous to exposure, though apparently healthy at commencement of attendance,	5
2d.	No such tendencies,	2
3d.	Doubtful, but appeared healthy,	1

In 1st class, only one had had symptoms previously, viz., hæmoptysis, years previously, without serious influence on the health. In the four others, one or more members of the family had had phthisis; viz., one mother, one uncle, one brother, and one sister.

The opponents of the idea that contagion had anything to do with the production of phthisis in the 1st and also in the 3d class, viz., in six of the eight cases given, will argue that these cases are utterly worthless as a ground-work of any argument for contagion, and therefore they should be put wholly out of the question. I cannot entirely agree to this view of the subject, when I remember that, without exception, my patients were all, apparently, in good health before they fell under the supposed deleterious influence of close attendance upon the consumptive friend; and that from the termination of that attendance the health of all was found to be undermined. Hence I really think I can claim, with a certain degree of reason, that, whatever were the hereditary tendencies, the attentions in nursing the phthisical friends were the *exciting* cause of their own disease.

But let us examine the two remaining cases:—And here also we must admit a certain lameness in one of them as a basis of argument, viz., a doubt about the *certainty* of the diagnosis. So we are really reduced to only one perfectly reliable case, in which no trace of tuberculosis can be found previously to the exposure. Now in this case, if we can ever allow ourselves to speak of causes in diseases, the phthisis and subsequent death were not only a sequence, but I think and others think a veritable consequence, in the strictest relation of cause and effect, of her previous close attendance on a tuberculous patient. But was there necessarily contagion in this case? By no means, the anti-contagionists will reply. It may well be questioned whether anything at all similar to contagion, as we usually understand that term, can be predicated of it. There is proof enough of weakened health, of dyspepsia, and its usual concomitants, and after months of gradually deteriorating health phthisis did set in. But then the same result might have occurred without any attendance on any body. It is the most common way for phthisis to develope itself. Confinement in any bad atmosphere, ill ventilated apartments, anxiety and depression of mind, irregular digestion, have often produced identically the same results. Then, again, they may say—If contagion had anything really to do with it, why did it prove so long in showing itself? Usually contagion shows itself soon. This was months in developing itself.

Dr. Drake meets this argument, by saying that we really know nothing of the length of time necessary for the incubation of phthisical influences. One disease is promptly contagious, and runs its course rapidly. This is no reason that the same rapid course should be pursued in phthisis. On the contrary, all *its* phases are slow. Why not its period of incubation? In fact, have we not a proof of this in the years that pass over before an hereditary tendency bursts forth? The arguments against contagion drawn from the long period elapsing between exposure and the evident disease is therefore really of small moment. But it falls wholly, when we remember how hydrophobia and other deleterious influences may remain dormant for an indefinite length of time—how miasmatic influences may remain years unknown, and then suddenly show themselves.

But again, say the anti-contagionists, the nature of consumption is very different, certainly, from the majority of contagious diseases; there is no eruption as in smallpox, measles, scabies, syphilis, &c. Above all, the actual inoculations by Kostum, Le Pelletier, &c., proved abortive.

To this the contagionists might reply—But there is whooping-cough, mumps, some sore throats, pleuro-pneumonia in animals, &c., from which there is not apparently any morbific matter recognizable by the senses. Yet these are capable of producing their kind. In regard to actual experiments of inoculation, it is asserted that they were not satisfactorily performed.

Still further, the non-contagionists say—If contagion acts, why have we not had more cases in these many years, and why such a vast preponderance of married females amongst these patients? Does contagion usually select women? Why not rather suppose that the entire *abandon* with which women throw themselves into the duty of nursing; their total recklessness, at times, when attending on a dear friend, of the commonest rules of hygiene in regard to air, exercise, food and sleep—that these, conjoined with and acting upon an excessively sensitive nervous nature, are the causes of the disease in those cases?

We may thus argue pro and con upon the subject, and yet not arrive at exact and definite opinions, as to the precise matter in dispute; and I will close this part of my paper with the single remark, that the strongest argument I know against contagion, is the fact that, considering my facts at least, woman is more liable than man to be taken. Why this, if there be not something at any rate more important than contagion to explain the phenomena of the case? The really contagious disease spares neither age nor sex. There must be something, therefore, more than mere contagion.

FINAL STATEMENT OF VIEWS.

Let me say that I commenced this investigation strongly prepossessed with the idea (gained while attending my patients and with a cursory knowledge of their antecedents) of the essentially contagious nature of phthisis, under certain circumstances. The force of my own facts, when thoroughly examined, has led me materially to doubt the correctness of my former impressions.

I will lay down the following propositions, which I believe correct.

First.—Consumption is not *contagious* in the usual acceptation of that word.

Second.—It may be *infectious*, and to this extent only. By long attendance of the closest kind, by inhaling the breath of the phthisical patient, by living in the phthisical atmosphere, so to speak, and in general by a neglect of hygienic laws during such attendance, the health may be undermined and phthisis set in. How far the depressing passions may have an effect, it may be impossible to say; but that they exert an important and deleterious influence, we cannot deny. Doubtless the want of exercise and the neglect of all hygienic laws have an immense influence. But as we see all these influences, except the supposed infection, existing often, for a long time, without producing phthisis (for example, a long attendance on patients ill with other non-tubercular diseases), I do believe that, in some few instances at least, we must admit a degree of real infection in our estimate of the matter. Especially must we take this into consideration in the case of a sister or a brother in a family, where the hereditary tendency to phthisis is strong; for in this case I doubt whether it would be safe to allow the sister to attend as nurse, even with the best moral and physical hygienic influences.

I am confirmed in this view by two more considerations. We see carcinoma and other chronic diseases have never even suggested this idea of contagion to the medical profession, at least so strongly as phthisis has. Is not this an argument in favor of the idea of there being something peculiar in tubercle, whereby it is capable, at certain periods of its development, of producing its kind? Second, I deem of some importance the positive statement made to me by a husband, the sole male patient among our cases. He distinctly asserted that the first real cough arose when he was raising his wife in bed, and consequently was making an effort and drew in a deep breath, inhaling at the moment while his wife was exhaling. The chief part of the air he drew in was loaded with emanations from her lungs. As she was, at that time, in the last stages of phthisis, those lungs were probably ulcerated, and possibly some irritating matters may have escaped with the expired air, and have been inhaled by the husband.

PRACTICAL CONSIDERATIONS, ARISING FROM THESE CASES.

While we may feel assured that contagion, as held by Morgagni and the Italians, is, at least in this country, a delusion—we may feel, I think, equally assured that we should warn a wife or a sister or near female friend from devoting herself too closely to the attendance upon a consumptive husband, sister or friend. For the sake of the attendant as well as the sick one, sleeping in the same bed, or even in the same room, should be avoided. If, however, this cannot be prevented, then we should try to eliminate all deleterious influences as much as possible. The room should be thoroughly ventilated and cleansed daily. The attendant should eat regularly and pay especial attention to the digestive system. The diet should be nourishing and simple. It would not be amiss for her to take some wine daily. She should walk daily out of doors, and not confine herself to the sick chamber week after week without release. In actual attendance she should beware of inhaling the breath of the invalid. Disinfecting agents might, with advantage, be used in the spittoons. In a word, every good hygienic influence should be brought to bear upon the attendant. At the same time I would have the community understand that, with such care, there is scarcely a trace of danger in any case, save that of a sister, or a wife whose husband is so miserably exacting or thoughtless as to demand that she should sleep with him during his illness. The danger of the health being injured in these latter cases is great, even if the above hygienic rules be strictly adhered to. The best plan is not to allow a sister or a wife ever to take the *sole* charge of the invalid. Whenever it is possible, let a regular hired attendant assume all the harder work, and sleep in the room, if need be, at night, or, still better, in an adjacent room. The wife or sister should be in the room only during the day, and even then with proper and regular intervals of removal to the fresh air. These rules it may often be impossible to carry out; still oftener, they *will* not be. Nevertheless, I believe our cases fully show that they are simply rational and right, and rules that the contagionist and anti-contagionist ought alike to adopt.

NEURALGIC AFFECTIONS AFTER INJURIES OF NERVES.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—Having read with interest the article entitled "Neuralgic affections after injuries of nerves," by J. Mason Warren, M.D., in the last number of *The American Journal of the Medical Sciences*, I have been induced to send you the history of the following case which came under my care while in the army.

A private in one of the Massachusetts regiments received, at the battle of "Chantilly," a wound caused by the passage of a Minié ball through the fleshy part of the thigh, posterior to the junction of the upper and middle third. The wound had been treated in the usual way, with water dressings and rest, and had quite healed when I was ordered to the Lyceum Hospital, in Alexandria, Va., where the patient was, about six weeks after the receipt of the injury. The patient soon after began to complain of pain in the sole of his foot and the calf of his leg, with nocturnal exacerbations, severe and of a shooting character. Whenever the limb was moved, the suffering was increased. I administered opium and the other anodynes in turn, freely, with but little good result. The only night's sleep which I was able to procure for him, followed the endermic application of sulphate of morphia to a blistered surface over the apex of the sacral plexus, and even this failed on a second application. Thus, after the wound was healed, the patient was in a worse condition than before, being deprived both of sleep and the slightest use of his limb.

Several similar cases having been benefited by the exhibition of strychnia, in the neighboring hospitals, I determined to try it in this case. I commenced with 1-16th of a grain, three times a day. The first night, after three doses had been taken, the patient slept well. At 4, P.M., of the second day, when I made my afternoon visit, he was more comfortable than he had been for some time, and felt quite hopeful of recovery, but at about 8, P.M., the time when his nocturnal pains had usually commenced, I was called by the nurse who told me the patient had a fit. I found him in a state of *strychnia spasm,* and yelling with the intense pain which he suffered during the paroxysms. The extension of the lower extremities, especially of the injured one, was very powerful indeed; the legs were shot out with such force as to shake the floor of the building, and the rigidity of the muscles was very marked. I administered 1 1-2 grains of sulphate of morphia, in divided doses, during the first half-hour, with but little appreciable result, and then gave, by inhalation, a mixture of ether and chloroform. Complete anæsthesia was not induced, but the spasms were relieved, after a considerable quantity of the anæsthetic had been administered, and any tendency to their recurrence was met by repeated applications of the sponge, during about two hours, when the patient fell asleep. The next morning he awoke entirely free from the neuralgic pain, and did not have a trace of it during the subsequent time he remained under my charge—about four weeks. His leg, however, was exceedingly sore for some days, as if it had been bruised. The patient was of a nervous temperament.

The explanation which I had made to myself of this case was, that the great sciatic nerve having been implicated in the cicatrix of the wound, thus causing the increase of pain upon moving the limb, was set free, and the adhesions were broken up by the violent muscular action. This explanation seems, to me, justified by the conditions which Dr. Warren speaks of as occurring in the healing of wounds in the vicinity of large nerves.

Very respectfully, DANIEL D. GILBERT,
Ass't Surgeon U. S. N.

U. S. Str. "Maratanza,"
May 10th, 1864.

RARITY OF PHTHISIS AT HIGH ELEVATIONS.

[WE take the following extract from an interesting article on the Climate of the Swiss Alps, by Dr. Hermann Weber, published in the *Dublin Quarterly Journal.* It has an important bearing on the question of selection of residence for phthisical patients in this country.—EDS.]

Tubercular phthisis occurs not rarely in the lower mountainous or sub-Alpine region, but in the true Alpine region it seems to be almost absent. Thus it is of very rare occurrence among the priests on the Great St. Bernard; and Dr. Brügger has scarcely ever observed it amongst those inhabitants of the Upper Engadin who have not resided in other countries, and has further found that this disease is generally cured, in natives of the Engadin, when they return to their mountains, before it has made great progress. Dr. Albert, of Briançon, in the Dauphiné (4,283 feet above the sea level), bears, according to Lombard (l. c., p. 93), the same testimony. These observations are quite in harmony with what we know of the occurrence of tubercular phthisis in other mountainous countries. Thus patients affected with phthisis at Lima are sent on the adjacent mountains of Peru, where phthisis is scarcely known at an elevation of about 8,000 feet. It is described as very rare at Mexico (7,000 feet) and Quito (8,700 feet), and still more so in higher elevations. The elevation, beyond which phthisis becomes rare or is absent, seems to vary considerably in different latitudes, and to become lower as we proceed toward the Poles. In the tropical zone it may be regarded as becoming rare above 7,000 feet; in the warmer temperate zone, above 3,500 to 5,000 feet; in the colder temperate zone, above 1,300 to 3,000 feet elevation. In Switzerland, between 46° and 48° N. latitude, the frequency of its occurrence diminishes above 3,000 feet; in the Black Forest, between 47° and 49° N. latitude, above 2,500; in the mountains of Thüringen and Silesia, and in the Harz, between 50° and 52° N. latitude, above 1,200 to 1,400 feet. Fuchs *(Medicinishe Geographie,* 1853, p. 35) states that at Brotterode (1,840 feet), in the Mountains of Thüringen, the percentage of deaths from phthisis is only 0·9. Brehmer assures us that in the neighborhood of Görbersdorf, in Silesia (1,700 feet), 'tubercular phthisis has never been seen by him amongst the inhabitants—(*Die Chronische Lungen-schwindsucht*, Berlin, 1857, p. 134)—an 'observation which Dr. H. Beigel, who has for several years resided at Reinerz (1,700 feet above the level of the sea, and very near to Görbersdorf), has, in a personal communication to me, to a great degree confirmed.

Scrofulous affections, in all their varieties, are not rarely met with in the Alps, especially in the narrow valleys. The insufficient food, the want of sunlight in the deep valleys during the greater part of the day, the crowded and ill-ventilated condition of the dwellings, to which the inhabitants are confined during by far the greatest part of the cold season, and which they share with their beasts, offer ample reasons for the explanation of this circumstance, which certainly ought not to be attributed to mountain air—the less so as in the true Alpine regions these affections are almost absent, or existing only in mild forms, as testified by Dr. Brügger for the Upper Engadin, and by several other medical men practising in the higher Alps (Lombard, l. c., p. 97).

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, MAY 26, 1864.

The New Hospital.—By the invitation of the Trustees and Medical Staff, the physicians of the city and vicinity had an opportunity on Saturday last of visiting the City Hospital of Boston before its public opening. A large number of gentlemen met to satisfy a curiosity as to the form in which this long-considered, vexed and much-desired project had at last been realized. They were received by Alderman Norcross and others of the Trustees, and were conducted over the establishment by the Superintendent. We think that not one of those who were then there for the first time had any previous conception of what modern skill in internal architectural appliances and apparently unlimited resources might accomplish in the construction of a hospital. To those who had spent a portion of their student life in European mediæval hospitals, such as the vast lazarettos of Italy, once filled with plague-stricken inmates, or the monastic and sombre institutions of Germany, or the old halls of Hotel Dieu of Paris, all simple structures of plainest stone and wood and plaster, but with steps worn by feet of many generations of students and famous teachers of our art, it seemed hardly possible that all this magnificence was also a hospital, unless designed for some exalted class of patients. Certainly there is none like it in the world, was a frequent exclamation. And yet with all the splendor of marble floors, rich carpets, electric clocks, lofty dome and corridors and pavilions, and the beautiful and grand systems of machinery for heating and ventilating the building, for washing and wringing and ironing the linen, and for the comfort of all its inmates, which it may gratify the pride of a wealthy city to have founded, it is to be remembered that its success as an institution after all rests almost wholly with the members of our profession, to whom it is so soon to be given in charge, and it is to them that the public will look to see that the large amount of money thus expended is properly devoted to its divinest purpose.

In a future number we hope to be able to give our readers a full description of the internal arrangements and novelties in construction of a hospital, which in all points but size must rank among the most perfect yet built. In some of its details it is indeed open to criticism, but these defects are such as can be easily remedied. Two wings are now completed and furnished for the reception of patients, affording present accommodation for one hundred and fifty patients, medical and surgical, in addition to the elegant private wards in the central building. It is to be open to the sick upon the first of June. We are sorry to hear, however, that the Trustees have decided to exclude from its walls just the class of patients for which alone there was any imperative need of hospital accommodation, namely, lying-in women, and those affected with venereal and contagious diseases. It seems to be the design to make it another Massachusetts General Hospital, a plan which could not be too highly praised were two institutions of that character needed at present in this city; but it appears to us that, if this exclusive system is allowed to prevail, the petition of the physicians of Boston has not been answered, and that we still have as great need of a *city* hospital as before.

The public dedication of the building took place on Tuesday morning, 24th inst., the exercises being conducted in one of the upper wards of the north pavilion. The hall was filled with ladies and gentlemen, and the addresses were of a very interesting character. The profession is particularly indebted to Ex-Alderman Amory for his devotion to their interests in connection with this institution from its beginning, and for the generous appreciation of their services expressed in his excellent address.

ORDER OF EXERCISES.

I.—Introductory by the Choir.
II.—Delivery of the Keys by the Committee on Public Buildings to His Honor the Mayor.
III.—Delivery of the Keys by His Honor the Mayor to the Board of Trustees.
IV.—Reply of Alderman Norcross, Chairman of the Board of Trustees.
V.—Prayer.
VI.—Address by Thomas C. Amory, Jr., Esq.
VII.—Hymn.
Benediction.

Board of Trustees of the City Hospital.—Otis Norcross, George W. Warren, David H. Coolidge, Wm. Cumston, John T. Bradlee, Dr. Wm. R. Lawrence, Theodore Metcalf, Sumner Crosby.

WHAT IS AN ORGANISM?—It used to be taught, and until recently was very generally believed, by the highest scientific authorities, as well as by unlearned persons, that certain phenomena occurring in living beings were in their very nature essentially distinct from any changes taking place, or which could be caused by man to take place, in inorganic matter. And, as a consequence, until very recently, *living* organisms have been regarded as in some way quite different from things inanimate. *Vital actions* were supposed to be different from *physical and chemical actions.*

But it has long been known that physical and chemical changes take place in living organisms, and of late it has been stated that these physical and chemical actions are the *only actions* which occur, and hence they are the "vital actions" which were believed in by a school gone by. If this be so, it would be correct to use the words "organism," "vital," &c., in cases in which it was not possible that ordinary life could be sustained, or it would be correct to give up the use of these words altogether. Inorganic matter in a certain state, but, as far as we know from experiment, utterly incompatible with life, has been said to exhibit *vital* phenomena, although it cannot *live* according to the ordinary sense of the word. On the other hand, things which undoubtedly do live, are said to exhibit changes resulting from the action of ordinary force. "Organizing force" is but another mode of heat.

If the development of heat, light and electricity results from vital action, and be characteristic of organisms, why should not a mass of inorganic matter which exhibits heat, light and electricity be an organism? But it has not been shown that heat, light and electricity result from *vital action*; and, until this has been done, it must be more correct to regard them as *physical phenomena* wherever they occur, than as vital phenomena when they are manifested in inorganic matter.

But, if it were true that there is no real distinction between *vital and physical and chemical actions*—if there were, indeed, *no actions* occurring in living organisms peculiar to living organisms alone—let the use of all terms with which mysterious (vital) agencies are associated be abandoned; for, by retaining them, it is clear that we retard the real progress of science, and inculcate ideas which are not supported by facts, and which are really destitute of truth.

But it seems to me that many high authorities have rejected the idea of the existence of peculiar and unexplained actions (vital) in living beings, not upon insufficient evidence, but without any evidence to justify such a step; and it is not a little remarkable that not one of those who have accepted and taught these doctrines has ventured to describe what, according to his notion, takes place in living matter. It is right that these questions should be fairly investigated, and they are questions well worthy of attentive study, if the only object be to assign to many words now in common use, and employed very vaguely and in different senses, a definite and precise meaning.

Sir John Herschel has more than hinted that the term "organism" may be applied to matter even in a state of incandescence. Speaking of the willow-leaf like bodies discovered by Mr. Nasmyth upon the surface of the photosphere of the sun, he says:—These flakes, be they what they may, "are evidently the immediate sources of the solar light and heat by whatever mechanism or whatever processes they may be enabled to *develope*, and, as it were, *elaborate these elements from the bosom of the non-luminous fluid in which they appear to float.* Looked at in this point of view, we cannot refuse to regard them as *organisms of some peculiar and amazing kind*; and, though it would be too daring to speak of such *organization* as partaking of the nature of life, *yet we do know that vital action is competent to develop both heat, light and electricity.*"—(*Good Words*, 1863, p. 282.)

But the President of the British Association goes a step further, and even ventures to suggest the particular class of organisms with which these bodies may be compared. He thinks they are shaped like *diatoms!* "I have still to advert to Mr. Nasmyth's remarkable discovery that the bright surface of the sun is composed of an aggregation of apparently solid forms, shaped like willow-leaves, or some *well-known* forms of Diatomaceæ, and interlacing with one another in every direction. The forms are so regular in size and shape as to have led to a suggestion from one of our profoundest philosophers of their being *organisms, possibly even partaking of the nature of life*, but, at all events, closely connected with the *heating* and *vivifying* influences of the sun." (Report of Sir William Armstrong's Address to the British Association, *Athenæum*, August 29th, 1863.) In the above quotations the italics are my own.

The word "organism" is here applied to sheets, flakes, or scales having some sort of solidity, about 1000 miles in length, and 200 or 300 in breadth, the temperature of which is far higher than would be sufficient to keep the most refractory metals in a state of complete fusion, if not to convert them into vapor. With true respect, but with the utmost earnestness, I venture to express the opinion that "organism" cannot be properly applied to these bodies.

I will advance my objections *seriatim*, and I hope to be able to show that there are actions going on in every kind of living matter totally different in their nature to any actions which are known to occur in ordinary inorganic matter. I submit, in spite of many assertions, but *mere assertions* to the contrary, that we must still draw a most definite and well-marked distinction between mere physical and chemical changes, whether they occur in things that "live" or in inanimate inorganic matter: and *those peculiar "vital actions"* which alone occur in matter that is alive. In these papers it will be my object to attach a precise and definite meaning to the terms "vital," "life," &c., and I shall endeavor to state the arguments in favor of this view as simply and clearly as possible. The evidence which I shall bring forward, I think, justifies the inference that these solar bodies regarded as "organisms," differ from any known organisms in so many essential particulars as to render this term altogether inappropriate. I hold that this term "organism," cannot be correctly applied to these solar bodies and also to living beings. From any known living beings these bodies differ in structure, in composition, in size and form, and in action; for it will be shown that, in every kind of living matter known to man, certain actions take place which cannot possibly occur in the sun.

1. As to structure. Every living organism around us, and every elementary part of an organism, consists of matter in two very different states. It is not possible to find a piece of any living tissue as much as $\frac{1}{500}$th of an English inch in diameter which exhibits uniformity of structure throughout.

In answer to this asserted difference in structure between living tissues and inorganic matter, it will be said—Corresponding differences in structure *are* observed; for example, the section of a plum-pudding stone, of granite, of certain homogeneous viscid substances subjected to the action of a voltaic current, &c., shows masses or spaces more or less isolated, exhibiting certain characters, in the substance of a matrix possessing characters and properties very different. Stones and brick embedded in mortar are like the "cells" embedded in the "intercellular substance" of which such a tissue as cartilage is composed. To this I answer as follows :—

a. Active and constant changes take place in the small collections of matter of which the so-called "cells" of the living tissue are partly composed, while the stones embedded in the mortar undergo no change.

b. The intercellular substance of the living tissue is *not deposited* around the "cells" like mortar around the stones, but it is formed from them. All the matter forming the "intercellular substance" or "cell wall" was at an earlier period in the same state as that matter of which the so-called "cells" are constituted. Now the mortar can exist without the stones embedded in it, but no "intercellular substance" was ever formed without "cells." And mortar may be made first, and then stones may be embedded in it; but "intercellular substance" is never formed first, and "cells" forced into it, or caused to appear in it. Stones can never produce the mortar which surrounds them, but "cells" always exist before the "intercellular substance," and always take part in its production.

c. The soft granular matter of which the "cell" is composed during the living state gradually passes by continuity of structure into the surrounding material—termed "intercellular substance" in some tissues, "cell wall" in others.

d. The soft granular matter of which the "cells" are composed exhibits differences of appearance in different parts. And I shall adduce evidence to show that growth in these masses occurs from the centre. These zones have received arbitrary names, as "Nucleolus," "Nucleus,"—but *names* are unimportant to the argument. No such differences, it need scarcely be said, exist in the stones. When the latter are embedded in the mortar no further change occurs ; but it is easy to show that most active and important changes occur in the "cells," although they are surrounded by "intercellular substance."

e. The smallest particle of each little mass or cell of a living tissue *selects, forms, converts,* and can communicate these wonderful powers to inanimate matter which comes into contact with it, but the surrounding "intercellular substance" or "cell wall," does not possess these wonderful powers which are peculiar and correctly termed VITAL powers. Hence no true analogy can be drawn between "cells" embedded in "intercellular substance" and bricks or stones embedded in mortar, until the bricks or stones make themselves out of matter differing from them and from the mortar in composition, multiply in number of their own accord, and form and deposit the mortar which surrounds them.

Before the bodies in the photosphere of the sun can be compared to organisms, it must be shown that they possess some sort of *structure,* or at least it should appear reasonable to assume that some such difference in structure as can be shown to exist in all living tissues without exception, was possible and probable. But all known organisms differ from these bodies and from every kind of inorganic matter in many particulars besides structure.—L. S. B., King's College, London, in *The Reader*.

MASSACHUSETTS DENTAL ASSOCIATION.—The first annual meeting of the Massachusetts Dental Association was held on Tuesday, the 16th inst., at which the following named gentlemen were chosen officers for the ensuing year:—N. C. Keep, M.D., *President.* I. J. Wetherbee, D.D.S., *Vice President.* T. H. Chandler, *Recording Secretary.* E. C. Rolfe, M.D., *Corresponding Secretary.* S. J. McDougall, *Treasurer.* E. N. Harris, D.D.S., *Librarian.* I. A. Salmon, A. A. Cook, B. S. Codman, M.D., H. F. Bishop, D.D.S., T. H. Hitchcock, M.D., *Executive Committee.* Dr. N. C. Keep was also appointed to deliver the address at the next annual meeting; Dr. I. J. Wetherbee as substitute. THOMAS H. CHANDLER, *Secretary.*

AMERICAN MEDICAL ASSOCIATION.—That the organization of the meeting may be effected with as little delay as possible, and at the appointed hour of 10, A.M., the Committee of Arrangements particularly request that the secretaries of the several bodies purposing to send delegates to the Association, would forward their appointments *immediately* upon their being made. This will be the *voucher* for the delegate, and will avoid every embarrassment in registration. The delegate may present his voucher from the secretary. Delegates desiring to read "papers, essays, or memoirs," will send early the title and time required to read them. The Committee will be in session on Monday, 6th, from 12 o'clock to 5, P.M., and Tuesday morning at 8, in the Irving Hall, Irving Place. JAMES ANDERSON,
Chairman, 30 *University Place, New York.*

THE ILLINOIS STATE MEDICAL SOCIETY held its 12th annual session in Chicago, commencing on the 12th inst., and continuing three days. Among the papers read were two on cerebro-spinal meningitis—by Dr. J. Adams Allen and Dr. R. E. McVey. Dr. J. S. Whitmore also reported verbally three cases of the same disease in his practice. A resolution was adopted to the effect that the present pay and rank of surgeons and assistant surgeons in the army are disproportionate to the services performed, and that proper exertions should be used for relief by national legislation on the subject.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, MAY 21st, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	48	41	89
Ave. mortality of corresponding weeks for ten years, 1853—1863,	36.1	33.7	69.8
Average corrected to increased population - - - -	00	00	76.85
Death of persons above 90 - - - - - - -	0	0	0

DEATHS IN BOSTON for the week ending Saturday noon, May 21st, 89. Males, 48—Females, 41.—Abscess, 2—accident, 3—apoplexy, 1—inflammation of the bowels, 1—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 1—consumption, 12—convulsions, 2—croup, 7—dropsy, 5—dropsy of the brain, 2—drowned, 1—erysipelas, 1—scarlet fever, 5—typhoid fever, 2—disease of the heart, 2—insanity, 1—disease of the kidneys, 3—congestion of the lungs, 1—inflammation of the lungs, 11—marasmus, 1—measles, 2—old age, 2—scrofula, 1—smallpox, 6—disease of the spine, 1—teething, 2—unknown, 7—uterine disease, 1—whooping cough, 1.

Under 5 years of age, 41—between 5 and 20 years, 7—between 20 and 40 years, 15—between 40 and 60 years, 18—above 60 years, 8. Born in the United States, 70—Ireland, 14—other places, 5.

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SUNSTROKE, OR PARALYSIS OF THE HEART BY HEAT.

By R. Cresson Stiles, M.D., Prof. of Physiology in the University of Vermont.

[Communicated for the Boston Medical and Surgical Journal.]

The number of cases of sunstroke which occurred in the Second Corps of the Army of the Potomac on the marches of the last summer's campaign, and the diversity of opinions among our medical officers respecting its nature and treatment, decided me to seek the earliest opportunity of bringing the currently received pathology of the disease to the test of experiment. As the result of a large number of observations on animals subjected to an elevation of temperature in various modes, and which presented a series of symptoms very closely allied or identical with those of sunstroke as I had seen it, and as I found it described by careful observers, I have reached the conclusion that the disease results from the direct action of heated blood upon muscular tissue, and that its fatal termination is owing to a paralysis of the heart from the same cause.

By publishing my experiments I hope to secure greater interest in accurate observation of the disease and greater unanimity respecting its rational treatment. They may be divided into five classes:—

1st. Those in which warm-blooded animals were subjected to an artificial elevation of temperature, the symptoms they manifested observed, and *post-mortem* appearances noted.

2d. Those in which artificial respiration was practised as soon as the animal became comatose or the pupil became contracted.

3d. Those in which blood heated to 120° Fahr. was injected into the veins of the animal from which it had been drawn, or in which the blood of an animal perishing from the disease produced by heat was injected into the veins of an animal of the same species.

4th. Those in which it was proved that the muscular system of an animal could be paralyzed by heat while its nervous system was left intact.

5th. Experiments on muscular contractility as affected by heat.

Class 1st.—The following may be taken as a type of this class.

A rabbit is placed in a glass jar, or bell glass, of sufficient capacity for free respiration during the experiment. A thermometer is suspended from the cover of the jar, and the jar immersed in hot water. The temperature of the interior of the jar is raised above 115°, but not allowed to rise above 120°. Soon after this heat has been reached, after a period varying with the size of the animal, the animal becomes restless and respires more rapidly; the bloodvessels of the ears enlarge, and their pulsations (which are almost imperceptible on a healthy rabbit) are distinctly felt. The heart beats more rapidly. At length the animal utters a few cries, and becomes comatose. The pupils are dilated, but in a few minutes become contracted. When contraction of the pupil has ensued, the animal is removed from the heated medium. He lies motionless, but the eyelids close on touching the conjunctiva. The ears continue hot. Their bloodvessels are still full, their pulsations forcible and rapid. In a variable period (from a quarter to a half hour after contraction of the pupils) the bloodvessels cease to be distended; the ears and mucous membranes, where visible, take a bluish tint; respirations diminish in frequency. Occasionally life is terminated by an attack of convulsions, but oftenest ceases gradually. When the thorax is opened, the ventricles of the heart are found rigidly contracted, or become so in five or ten minutes, both auricles distended with blood and manifesting fibrillar movements. Neither brain nor lungs are congested. The venæ cavæ are filled with dark blood, which is alkaline and coagulates rapidly. The cut surface of the ventricles is acid to litmus paper. Under the microscope the blood is normal, but the muscular fibres of the heart have lost their transverse striations. Rigor mortis comes on between one and two hours after death. The rigid heart becomes relaxed and quite flaccid in a few hours. The odor of putrefaction is very soon manifest, although the temperature of the laboratory is not above 60°.

Various animals were immersed in water at 115°, held by the back of the neck, the head above the surface. The larger animals, if allowed to respire the free air, panted violently, but resisted the fatal influence of the heated medium. Small animals, as mice and rats, soon perished; the mucous membrane of the mouth, at first redder than natural, became livid; the respirations gradually ceased, with gasping. In a rat that had struggled violently against efforts to secure him and was immersed in water at 120°, the mucous membranes became pale in five minutes, and in five minutes more all the muscles of the body became rigidly and permanently contracted. In these experiments, a thermometer introduced immediately after death into the thoracic and abdominal cavities did not rise above 115°; it often gave one or two degrees below that temperature. Distension of the stomach by a full meal, and loss of blood, hastened the fatal termination. A litter of kittens served for these comparative experiments.

Class 2d.—In these experiments the trachea was opened, a tube inserted and artificial respiration kept up as soon as the respiratory movements began to fail. Life was not prolonged by this proceeding.

Class 3d.—In a cat that had died in heated air with all the symptoms of sunstroke, the thorax was opened and blood drawn from the vena cava ascendens with a hypodermic syringe. This was immediately injected into the jugular vein of another cat previously etherized. Not the slightest toxic symptom was manifested.

Class 4th.—The reflex actions manifested by animals apparently moribund from the effects of heat presented a decided contrast to those of narcotism or exhaustion of the nervous system. But the effects of heat on cold-blooded animals served to show more plainly its comparative integrity. On account of the sluggishness of their circulation, the heart is the last organ to feel the influence of a heated liquid. The circulation in the web of a frog's foot is temporarily arrested by a temperature of 115°. When a frog is thrown into water at that temperature all the muscles of the body become rigid in one or two minutes. If a limb does not share in the immersion it will remain unaffected, or only that portion of the limb which is immersed becomes rigid. In frogs immersed to the thighs in water at 120° even, and kept exposed to its influence some time after the anterior extremities and the muscles of the trunk have become rigid, irritation of the spinal cord in the cervical region will cause the muscles of the hind legs to be convulsed. The thigh of a frog, with the sciatic nerve projecting, immersed in water at 120°, will become rigid, but the foot will be convulsed on irritation of the projecting nerve. These experiments show plainly that the nervous system is less sensitive than the muscular to the influence of a high temperature.

Class 5th.—The more violent the activity of a muscle the lower the temperature at which it will pass into a state of rigidity. This was proved in several ways. A frog with one sciatic nerve divided was thrown into convulsions with strychnia. The hind legs, separated from the trunk, were immersed simultaneously in heated water. When the limb which had been convulsed had become rigid, the other was removed from the water quite flaccid. The hearts of reptiles, which beat long after removal from the body, were immersed in heated water at a temperature just sufficient to arrest their pulsation. If in this condition they were irritated and caused to beat, they immediately became rigidly contracted.

The cut surface of a muscle in an animal killed by section of the medulla oblongata is not sensibly acid; that of a muscle made rigid by heat is decidedly acid. The muscles of a frog tetanized by strychnia are hardly more acid than in the natural state; those made rigid by heat are decidedly acid. The bloodvessels of the ear of a rabbit rendered comatose by heat could not be made to contract by galvanism or immersion in ice-cold water. The non-striated muscular fibre of the arterioles seemed to have lost its power of contraction, or it was at least too debilitated to resist the pressure of the blood communicated from the dilated arteries below; but the peristaltic action of the intestines is well marked in an animal dying from the influence of heat. The pupils of a frog, which contract after death, are dilated widely when the eye, removed from the orbit, is immersed in a liquid at 115°.

Effects of Elevation of Temperature on the Human System.—Under the names of sunstroke, coup de soleil, ictus solis, heat apoplexy, heat asphyxia, sun fever, erethismus tropicus, thermohæmia, thermic fever, a well-marked affection has been described, not to be confounded with cerebral congestion, apoplexy, meningitis, pulmonary apoplexy, epilepsy, or simple exhaustion and prostration occurring during the prevalence of excessively hot weather and favored by a high temperature, which have often been mistaken for ·or have complicated the disease in question.

Causes.—The greatest number of cases are the result of muscular exercise in the sun in excessively warm weather; but the direct action of the sun is merely a favorable condition, it is by no means a necessary cause. Mr. T. E. Dempster, in giving a description of the disease as it occurred in the English Army in Bengal in 1849, says:—"During the first few marches a number of men fell victims to that fearful disease [sunstroke]; the fatal seizures usually occurred about 3 o'clock in the morning, and long before the sun was above the horizon." Mr. H. S. Swift, in an article on sunstroke published in the *New York Journal of Medicine* in 1854, describing the disease as seen in the New York Hospital, gives the following:—"Eleven cases were attacked one morning in the laundry of one of our principal hotels; several were brought to us from a sugar refinery," "and we had the opportunity of comparing their symptoms and lesions with those who became exhausted after laboring in the sun, but were unable to satisfy ourselves of any distinction." The direct heat of the sun, which made a gun-barrel unpleasantly hot to the touch, was the most frequent condition of the disease as it occurred in the Army of the Potomac last summer. I had occasion to notice its unusual prevalence during marches under a cloudless sun, before a thunder storm. Such was the morning on which the Second Corps broke camp near Morrisville and marched to the Rappahannock in the advance to Culpepper Court House and the Rapidan.

Foreigners from the north of Europe, and particularly those of recent arrival in the country, are peculiarly liable to the disease. Their skins are too thick and sluggish for our high and variable temperature. Diseases of the abdominal viscera, as diarrhœa, and a febrile state particularly, predispose to the affection.

Symptoms.—The disease, when fatal, presents, usually, two well-marked stages. It is ushered in by sudden pain in the head, weakness, præcordial distress, vertigo and insensibility. This last is so sudden that the term "stroke" is properly applied to the onset. The insensibility deepens into coma, with dilatation of the pupils. The pulse, however, is both full and frequent. Respiration is hurried. The mucous membranes are red and dry, the skin dry and hot; both of a deeper color than natural. The first stage occupies the principal portion of the time. The average duration of the fatal cases is in all only four hours. This is succeeded by a stage of collapse. The pupils become contracted, or may remain dilated; respiration becomes stertorous, with moaning; the pulse feeble, remaining frequent; the mucous membranes become livid, the skin cool. Life disappears gradually, with occasional gasping respirations and tracheal râles; or death may take place suddenly, with an attack of convulsions.

The disease may present, at the onset, the symptoms of the second stage, the first having been wanting, or imperfectly marked, and the approach of death is then speedy. Contracted pupils and moaning respiration are signs of a fatal termination.

The milder cases, which recover, present the symptoms of the first stage only. When the momentary or short stupor passes by, the panting and manifestations of præcordial distress are often pitiable. Thirst is excessive, but deglutition and articulation difficult. One half of the cases, as seen in the hospitals of New York and Philadelphia, are fatal. In the army, the proportion of fatal cases among those falling out of the ranks with the symptoms of sunstroke, is certainly much less.

Pathological Anatomy.—I have not witnessed a *post-mortem* examination in a case of sunstroke. The speedy decomposition of the body renders the opportunity of making valuable *post-mortem* observations transient. Prof. Pepper, of the University of Pennsylvania, found the heart dilated and flaccid. Dr. H. S. Swift states that "the *post-mortem* appearances, though of a negative character, are precisely opposite to those found in congestion of the brain or apoplexy produced by insolation." Dr. Horatio C. Wood, in the *Am. Journal of the Med. Sciences* for October, 1863, reports a number of *post-mortem* examinations made from one to two hours after death. He notes that the heart was rigidly contracted, but as rigor mortis of that organ usually ensues within that period, there could have been nothing remarkable about the contraction, except its rigidity and completeness. He notes the absence of cerebral and pulmonary congestion, and the liquidity of the blood.

Physiology.—I can find only three modes in which endeavors have been made to explain the physiology of sunstroke:—through the nervous system, through the lungs, and through the blood. The theories of cerebral apoplexy may be neglected. Jas. Ranald Martin, F.R.S., in the London *Lancet* for 1859, thus resumes an argument respecting the nature of the disease:—"Extreme venalization of the blood, acute congestion at first, proceeding to passive congestion and narcotism of the lungs, heart and brain." The following is a quotation from the article referred to by Dr. Swift. His theory is in close accordance with the facts of the disease. "There are many points of resemblance in the appearance of those who have died from the effects of heat, and cases reported of death from lightning. Does the heat produce death by destroying the 'vital principle,' as Hunter supposed was the effect of lightning? Does it produce some chemical change in the blood itself, so that it can no longer subserve the purposes of innervation, or does it produce its effects primarily on the nervous system? This is the most plausible theory. The vital powers, already enfeebled by fatigue and the heat of the atmosphere, are unduly stimulated. The natural balance of the circulation is destroyed, and the heart contracts with a 'morbid activity.' The lungs are engorged with blood and the heart labors to overcome the increased obstacle, until at length it is exhausted by this 'morbid activity,' and passive congestion takes place in the capillaries throughout the body."

Dr. H. C. Wood attributes the disease to a poisonous property acquired by the blood, and suggests the name of thermic fever or thermo-hæmia. I commenced my experiments with a prejudice in favor of this theory, but was soon compelled to abandon it, or to regard the only poisonous property of the blood to be its elevated temperature. The remarkable contraction and rigidity of the heart directed my attention immediately to the muscular system. They have proved that a temperature of the blood below 115° Fahr. is sufficient to destroy life in vertebrate animals of all classes; that a temperature between 115° and 120° is sufficient to cause rigid contraction and paralysis of muscles, whether connected with or separated from the body of the animal; that the more violently a muscle is made to contract, the lower the temperature at which it will become paralyzed; and that a disease is produced by heat in the lower animals presenting symptoms almost identical with those of sunstroke, in which the heart is found rigid immediately after death.

The cases in which Prof. Pepper found the heart flaccid were those in which rigidity had disappeared from the rapidity of *post-mortem* changes; those in which Dr. Wood found the heart contracted are explicable from the time of the examination. That the blood rises in sunstroke to a temperature sufficient to produce muscular paralysis is proved by the fact that Dr. Dowler found a temperature of 112° in the axilla. The dilatation of the capillaries is explicable by the direct effect of the heated blood upon the muscular fibres of the arteries and arterioles. The cerebral symptoms, and the full and forcible pulse may also be due to this dilatation. Bernard found that section of the sympathetic nerve in the neck of a horse raised the column of mercury in a cardiometer placed on one of the small arteries of the neck sixty millimetres (about $2\frac{1}{3}$ inches) above the level indicating the pressure in the artery before the section. The dilatation of the arteries must have been the only cause of this increase of pressure.

The effect of heated blood upon the heart is termed *paralysis* rather than exhaustion, because heat has been shown to have the power of directly paralyzing its muscular tissue, and because in sunstroke the first stage, or that of frequent and forcible contraction of the heart, is not an essential part of the disease. But whatever may be the value of my theory, the facts of experiment are such as I have recorded them.

A CASE OF FRACTURE OF THE THIGH IN AN INFANT SEVEN MONTHS OLD.

By David W. Cheever, M.D., one of the Surgeons at the Central Office of the Boston Dispensary.

[Communicated for the Boston Medical and Surgical Journal.]

Chas. Henry Myers, between six and seven months of age, a puny child, but one neither scrofulous nor ricketty, fell from his sister's arms to the floor, April 23d, 1864, and sustained a fracture of the right thigh. This was on Friday noon. On the following Monday he was brought to the Surgical Department of the Dispensary for treatment. It was now three days after the receipt of the injury, during most of which time he had cried and worried constantly. The right thigh was tilted up, forming a prominent angle at its middle, upwards and outwards. The femur was broken in the middle of its shaft. The limb was swollen to double the size of the other. The groin and perinæum were excoriated, on the injured side. Crepitation and tenderness on pressure were found over the prominent centre of the femur; and, as an additional sign, the greater trochanter did not describe its usual arc of a circle on rotating the femur from the knee. Following the position of flexion and abduction natural in the young infant, the thigh was more tilted up and outwards than is usual in the same injury in the adult; and the tendency to displacement arose mainly from the spasmodic action of the psoas and iliacus muscles. In this respect it resembled the adult fracture of the upper third of the femur, where the two intra-pelvic muscles just mentioned raise the upper fragment, and also rotate it outwards, from their insertion into the trochanter minor, which lies behind rather than inside the femur.

The indications for mechanical treatment were plain enough, but the difficulty of carrying them out was very great, on account of the infant's tender age. Treatment by a weight, by the double-inclined plane, or by counter-extension from the perinæum, were all obviously impracticable. In the applications which were made the first few days we had to pay regard to the swelling, the tenderness and the excoriation. Accordingly we were not surprised to find, on the fourth day after treatment was begun, or one week after the accident, that no attempt at union had taken place, although the swelling and soreness were much reduced.

Under these circumstances the following apparatus was applied; which, as it succeeded very well, we think it worth while to describe, although it is but a modification of the old appliance of Scultetus. A double flannel binder was carried around the waist and hips, and secured by pins, because this fastening admitted of the readiest re-adjustment, either to tighten or loosen it. Between its folds were made two pockets; one over the hip and side of the ilium, the other in front of the anterior superior spine of the latter bone. The bony prominences of the hip, knee and ankle were carefully cushioned with cotton-batting. A long outside splint, made from a shingle, extended from the outer pocket down to, and an inch below the foot. An inside splint, of gutta percha moulded on, reached from the upper third of the thigh to below the foot, and was then turned at a right angle, beneath the foot, to meet the long splint. Both the lateral splints were rolled in sheet lint, several thicknesses, before they were applied. Next, an anterior splint, of gutta percha, with the upper end curved upward over the abdomen, extended from the anterior pocket of the binder, down to just above the patella. This splint was meant to meet three indications:—1st, to press upon the projecting ends of the fracture, and compress the muscles of the anterior aspect of the thigh; 2d, to strengthen the apparatus at the upper third, where the inside splint was obliged to stop short on account of the perinæum and the excretions; 3d, to prevent the child from bending the pelvis on the thigh in trying to sit up, which it did quite forcibly until the abdomen brought up against the end of the anterior splint.[*] This splint was well padded over the fracture, and all the space in the groin was well filled in with cotton-batting, so that when the splint was bound down, very considerable pressure was exercised over the tendons of the psoas and iliacus, although, of course, their fleshy bellies were inaccessible within the pelvis.

The limb being now gently extended, the three splints were secured pretty firmly with a dry roller. Next a wet bandage was put on, and plaster of Paris rubbed in until it was quite thick and stiff. For obvious reasons, the perinæum and upper third of the inside of the thigh were left uncovered. After the stucco bandage had set and dried, the whole was varnished over with common shellac, or coach-maker's varnish, several thicknesses, to prevent the urine from soaking through the bandage.[†]

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[*] "Coulon" uses the simple "*appareil de Scultete,*" and applies a bandage across the chest, under the arms, to keep the child supine. But none of his cases were as young as this one.—*Des Fractures chez les Enfants," par Coulon et Marjolin.*

[†] This excellent hint we owe to the history of a fracture of the thigh in a child of 23 months, admirably treated by Dr. John Green, and reported in this JOURNAL.

Finally, a strong and broad strip of cotton cloth extended from the flannel binder in front down to the anterior part of the thigh bandage, and was fastened by sewing. This secured the waistband from slipping up, or turning around, when the child twisted the trunk. Thus done up, the infant was left with the nates, perinæum and urinary apparatus free to be cleansed. As soon as the dressing was finished, crying ceased, and the child did not have another fit of worrying with its fracture during the duration of treatment. Meanwhile it underwent the cutting of two incisors, and a sore arm from vaccination, and yet gained in flesh and brightness. The mother had a good supply of milk, and the babe also received small quantities of iron. Occasionally a fresh coat of varnish was applied; but the urine did not pass through the bandages, and they were not changed until two weeks had passed.

One fortnight after its application, the apparatus was removed. The limb came out dry, clean and fresh, without an abrasion in any part. Union was good, the limb straight, and there seemed absolutely to be no shortening. Although we might expect firm union in fourteen days,* yet the child flexed and extended the leg so forcibly, that it was thought prudent to re-apply the apparatus. At the end of two weeks more it was finally removed, and the result was as perfect as could be desired.

The peculiar difficulties in treating a fracture of the thigh in so young an infant as seven months old, seem to be to secure immobility in so flexible and restless a subject; and to get moderate extension and pressure, without excoriation, either from this cause, or from the constant dribbling and infiltration of urine, and of the excretions of the bowels.

The apparatus above described allowed the child to be moved about, and even brought to the Dispensary occasionally on a pillow; thus relieving the tediousness—to a baby almost insupportable—of being confined in bed in one position.

As regards the youth of the subject, so far as we can find, the case is an unique one; and the result obtained seems to have justified the treatment pursued.

ON LIPOROCELE: ITS ANALOGY TO FATTY SERUM OF THE BLOOD AND TO CHYLOUS URINE.

By J. L. W. Thudichum, M.D., M.R.C.P. Lond.

Some time ago Mr. Fergusson operated upon a case of hydrocele, and withdrew a white, milk-like fluid. This fluid was brought under the notice of the Medical Society of London by Mr. Mason. At the request of the Society I undertook to further examine and report upon this singular pathological specimen. The substance of this report (which was delivered on April 4th, and accompanied with chemical demonstrations) is embodied in the following more extended observations.

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* Coulon gives the average of treatment at from twelve days to three weeks, in children's fractures.

The fluid was white, like milk, but in the thinnest layers was much more opaque than milk, showing that the particles causing the whiteness were much smaller than those in milk.

On standing, the fluid formed a *cream* on the top and a *sediment* at the bottom. The *cream* consisted, as seen by the microscope (420 diameters), of countless masses of very minute particles, having no resemblance to ordinary fat-globules in milk or animal tissues. Amongst the particles floated numerous roundish conglomerations of particles, pretty uniform in size and shape. They admitted of no further surmise as to their origin (no cell-structures being distinguishable) than that they were actually only particles of suspended matter which had coalesced by continued agitation.

The deposit consisted of crystalline masses, corresponding in appearance to what is usually described in text-books on animal chemistry as *margaric acid.* Closer examination with high powers distinguished two different kinds of crystals:—1. Very thin rhombic plates, distinguished from those usually formed by cholesterine in this, that their longest diagonal was about four times the length of the shorter one; while in cholesterine the relation of the longest diagonal to the shortest one is hardly 2:1. 2. Sheafs of needles, of which the crystallic shape could not be defined. They were lying in free bundles, or attached to the plates.

The fluid had an *alkaline reaction.* It had a slightly putrid odor, as it had been kept for some days, but the alkalinity was not a result of this otherwise very slight change. Mr. Mason had found it alkaline when fresh. Its total quantity was about 60 cubic centimètres.

By a qualitative examination, it was ascertained that it contained much albumen, fatty acids (but no neutral fats), phosphate of soda and chloride of sodium. Neither potash (searched for photoscopically) nor lime or magnesia could be found in the fluid from which albumen had been removed.

Twenty cubic centimètres of the fluid were shaken with an equal bulk of ether, and formed a permanent emulsion with this fluid. No ether appeared on the surface; the milky whiteness disappeared; the mixture, however, remained opaque. The quantity of ether being doubled, it separated easily after agitation, and was found to be of a yellowish color. It was drawn off by a syphon fixed in a flask by means of an air-tight cork. The extraction of ether was repeated six several times; the ethereal solution allowed to stand, in order to deposit some suspended watery particles, then decanted, and the ether distilled off in the water bath. The residue was extracted with absolute ether, and again evaporated and dried in a current of air in the water-bath. It consisted of a solid mass of fatty acids, entirely resolvable on boiling with solution of common phosphate of soda, in the form of an emulsion. The residue weighed 0·330 grammes. The milky hydrocele fluid, therefore, contained 1·65 per cent. of fatty acids.

The fluid from which fat had been extracted, and which yet contained ether in solution, was now mixed with absolute alcohol, which caused a copious precipitate of *albumen*. The magma was acidified by a little acetic acid, and in small portions gradually put into a dish on the water-bath to evaporate alcohol and ether, and effect the most complete precipitation of the albumen. The albumen was then extracted repeatedly with water, washed on the filter until neutral, and dried at 100° C. in the water-stove until its weight remained stationary. It weighed 1·695 grammes. The milky hydrocele fluid, therefore, contained 8·475 per cent of albumen.

The watery extract was evaporated in a platinum capsule, and dried at 100° C. It weighed 0·4162 grammes, equal to about 2·081 per cent. of the original fluid. It contained a little albuminoid substance and salts.

By ignition it lost 0·114 grammes, equal to 0·570 of the original fluid. There remained 0·3022 grammes of fire-proof salts, fusible and white, containing carbonate and some charcoal, which was destroyed by nitric acid and renewed ignition. The ultimate residue of salts was equal to 1·511 per cent. of the original fluid.

In the solution of these salts acidified with nitric acid, nitrate of silver yielded a precipitate, which (dried) weighed 0.4014 grammes, corresponding to 0.099 grammes of chlorine; or 0·163 grammes of chloride of sodium, corresponding to 0.876 per cent. of the original fluid. There remained, by calculation, 0·696 per cent. for the phosphate of soda; but, as was anticipated from the presence of carbonate of soda, and the impairment of the reaction for phosphoric acid, a portion of this acid had been destroyed during ignition. As was determined, however, by precipitation with magnesia and ammonia, there still remained phosphoric acid enough to yield 0·5 per cent. of phosphate of soda in the original fluid. We are, then, justified in assuming its quantity to be equal to that found by calculation.

One hundred grammes of the milky hydrocele fluid, therefore, contained—

	Grammes.
Albumen	8·475
Fatty acids	1·650
Albuminoid matter	0·570
Chloride of sodium	0·815
Phosphate of soda	0.696
Total solids	12·206

The peculiarity of this fluid consists in the presence of free fatty acids in a state of most minute mechanical subdivision and suspension, aided by weak chemical affinities. This state of suspension is commonly termed "emulsion." When phosphate of soda in watery solution and some fatty acid are agitated together, or quicker when they are boiled, such an emulsion is always formed. Neutral fats, or the triglycerides of butyric, stearic, and palmitic acids, do not yield any emulsion on boiling with phosphate of soda, but remain floating on its surface, leaving the fluid perfectly clear. Oleic acid also refuses to enter into a phosphatic emulsion.

The emulsions of stearic and palmitic acids, although of an alkaline reaction, are such loose chemical compounds that, without the addition of any acid, the fatty acids can be extracted by means of ether.

While the phosphate of soda alone will form an emulsion with fatty acids, this property is much enhanced by the presence of albumen. This substance makes the suspension much more permanent.

Whether the emulsion contain albumen and phosphate, or only phosphate, the fat can be equally well extracted by ether. Both emulsions, on standing at rest, allow the particles of fatty acid to collect at the top in the form of a cream; but this separation of the fatty acid is never complete except after addition of an excess of acid to the emulsion. But even acid phosphate of soda in the presence of albumen will retain some fatty acid in emulsion (chylous urine).

When to an emulsion of fatty acid with phosphate an excess of phosphate is added, and the fluid allowed to stand, the fatty acid compound collects at the top of the fluid, and the lower stratum of the fluid becomes clear. This separation of fatty acid compound by excess of salt must not be confounded with the formation of a cream of particles of fatty acid.

The occurrence of an emulsion, or of a white or yellowish milk-like fluid in the animal economy, under normal or pathological circumstances, justifies at once the surmise that there are present albumen, fatty acid, and phosphate of soda. On the other hand, a fatty substance which gives an emulsion with phosphate of soda is most probably stearic or palmitic acid. Neutral fats, butter, lard, suet, or human adeps, or fat from fatty livers or from cancerous tumors, do not yield the emulsion. The fat from fatty livers or cancerous tumors (speaking from a limited number of observations only) is consequently neutral fat; or if it contain acid fat, it must be the oleic acid.

The peculiar form of hydrocele containing milky serum has been occasionally observed at Paris, and there been termed "galactocele," or milk rupture. This name is not more inappropriate than that of hydrocele, or water rupture. But while it would be impracticable to attempt a substitution of serocele for hydrocele, it is perhaps practicable to avoid the term "galactocele," and to term cases of the above nature "liporocele," or "fatty serum rupture."

The next question which it is important to answer is as to *the* *origin* of this fatty serous fluid. The only probable source is of course the blood. But the circumstance which caused it to be exuded by the serous sheath of the testicles it is more difficult to surmise. The following experience will, however, assist us in forming an opinion on this subject.

Case of fatty or chylous serum of the blood, causing congestion of the brain and threatening paralysis.—A butcher had eaten a very large dinner with much fat meat, and in consequence had a few hours afterwards been attacked with severe congestion to the head, threatening apoplexy. He was bled to the extent of about sixteen ounces, had purgatives administered to him, and he recovered. After the blood had coagulated, the clot was found floating in a thick or turbid yellowish serum. About four ounces of serum were obtained and examined. Treated with ether the matter causing the turbidity dissolved, and, after distillation of the ether, was left in granular and oily particles. Boiled with phosphate of soda it formed a milky, thick emulsion. It was, therefore, mostly fatty acid. A second extraction with ether yielded some more, but yellow fat, the first having been white. Under the microscope the solid particles of the fatty matter consisted entirely of the balls of fine needles, commonly called margaric acid (stearic and palmitic acid). The fatty residue again dissolved in ether left some albuminous matter behind, which was also insoluble in alcohol. It was separated by filtration, and, after evaporation of the ether, drying under the air-pump, fusing in the water-stove, and drying over sulphuric acid, left 50·59 grains of fatty acids, being about 2·6 per cent. of the serum.

It has not yet been ascertained whether the fat taken with the food does normally undergo a separation into fatty acids and glycerine, so that we cannot say whether or not the presence of fatty acid in any portion of the blood is a regular occurrence or a pathological feature. But the following relations are possible:—

a. The presence of emulsed fatty acids in serum (of a vein of the arm, and consequently in a greater portion of the blood) is a normal occurrence. Presence of fatty acid beyond the normal quantity is, however, pathological, and causes the blood to stagnate in the capillaries, producing congestion and effusion.

b. The presence of emulsed fatty acids in the serum of the blood is of itself a pathological feature, and able to produce the symptoms of congestion and effusion.

c. In any case the presence of the fatty acids is preceded by their formation, and this formation may of itself be a normal or a pathological process. It may be so by its occurring in the wrong place, at the improper time, or the acid may persist improperly long without being further assimilated. It may, for example, having been imported into the blood by the chyle, pass through the pulmonary circuit, and be contained improperly in arterial blood, causing various kinds of congestion, but more particularly congestion in that typical form of blood and kidney disease which manifests itself by the secretion of so-called *chylous urine.*

It was the peculiar fatty matter of this kind of urine that first directed my attention to the importance of the distinction between neutral fats and fatty acids from a pathological and practical point of view. In my treatise on the "Pathology of the Urine," p. 240, I recorded that I had found the fatty matter of chylous urine to consist of oleic and margaric acid (the latter now commonly admitted to be a mixture of palmitic and stearic acids). When I had found the fatty serum above described, I studied the nature of chylous urine synthetically. I added some of the fatty serum to healthy urine, producing mixtures of various proportions of the ingredients, approaching them as nearly as possible in external appearance to natural specimens of chylous urine. It was impossible, either by the eye and the smell, or by microscopical and chemical analysis, to distinguish the artificial chylous urine from the pathological product. Chylous urine is urine containing an admixture of fatty serum: it is liporotic urine. Its abnormal ingredient is the same as the effusion in the orchideal tunic constituting liporocele.

Stearic and palmitic acid, combined with earthy bases, I have met with in human gall-stones (see Treatise on Gall-stones, p. 101). This occurrence deserves attention in connection with the subject of this article, on account of the circumstances that bile always contains some phosphate of soda. Supposing an emulsion of fatty acids to be formed by the liver, the supervention of abnormal acids and earthy salts would cause an insoluble precipitate of fatty acid with earthy base, while phosphate of earthy base might also fall down or remain dissolved, if the free acid be strong enough, and not allowed to stand at rest.

The emulging power over fatty acids of the phosphate of soda naturally contained in bile has given rise to the opinion that the bile was instrumental in assimilating the fats eaten with the food. But it is now certain that over neutral fats neither the bile nor phosphate of soda has any peculiar assimilating power. If digestion in the stomach produces any fatty acid (and it mostly seems to produce a little), it cannot be denied, but must be affirmed, that it will be chemically affected by the phosphate of the bile and that of the blood. It is, however, certain that the greatest amount of fat eaten reaches the chyle and the blood unchanged—that is, as neutral fat. If, then, it undergoes decomposition, it must take place somewhere in the circuit of the blood, and within that fluid.

Whatever may be the dependence upon or the connection with the presence of a phosphatic emulsion of fatty acids in the serum of the blood of congestion to the head, threatening apoplexy—congestion of a serous membrane, producing effusion of serum—and congestion of kidneys, producing an admixture of serum with a natural secretion,—it is certain that the information we possess justifies us in attributing great importance not only to the bearing of fat and fatty acids, but also to that of phosphate of soda, particularly in the presence of albumen. Hitherto the mineral substances of the animal economy have not met with that consideration in animal chemistry which we might justly believe them to deserve, seeing how essential they are to the completion of the life of plants. Those who have read the latest accounts of the experiments of Liebig on the growth of potatoes have been astounded to find that the want of one or two mineral ingredients of manure predisposed potatoes to be destroyed by the disease which is peculiar to them. The potatoes which grew in a bed containing all the mineral ingredients necessary for their growth were not only two or three times as fruitful as those which grew in a bed only partially manured, but they also exhibited no liability whatever to be invaded by the rot. May not the vine-disease find a similar explanation—say the mere want of potash in the soil? Does not this experience suggest to us the inquiry after the part which mineral matters take in the normal and diseased processes of the human economy?

In the walls of the stomach hydrochloric acid is produced, and carbonated soda in the blood travels towards the liver. The liver secretes a new combination, containing soda as its basic element. In the intestine the chlorine and sodium re-unite after a variety of intermediate conditions.

The food contains both soda and potash salts, but the economy of our bodies separates them in a marked manner. The flesh contains principally salts of potash; the blood, which everywhere nourishes the flesh, contains mainly salts of soda. In both, these different bases are mainly combined with phosphoric acid. But the blood contains also salts of potash, not only temporarily during a period, so to say, of conveyance, but, the phosphate at least, as an essential and permanent ingredient of the red corpuscles. The serum, on the other hand, contains no phosphate of potash whatsoever. Whatever intermediate conditions of compromise may exist, the above relations are always those of the equilibrium to which the economy returns.

The fluid of the liporocele, while containing albumen almost in the same proportion as common serum of the blood, and fatty acid and phosphate of soda, with chloride of sodium in proportions which may also occur in serum of the blood, further resembled the plasma of the blood by the absence of salts of potash. This absence was, perhaps, not an absolute freedom, but the quantity which analogy might lead us to expect was inappreciable, owing to the limited quantity of material; of course, had any been found it would have had its significance. The life and health of plants, as well as those of animals, are very clearly dependent upon conditions which operate with the smallest quantities of matter, or dependent upon those matters essential to life which are present in the smallest quantity.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, JUNE 2, 1864.

Annual Meeting of the Massachusetts Medical Society.—The annual meeting of our State Society was held on Wednesday, the 25th inst., at the hall of the Common Council in this city, and was attended by a goodly number of members from all parts of the State. Dr. John Mackie, of New Bedford, was chosen temporary chairman, and after the usual preliminary business the election of officers followed with the following result:—

President, Dr. A. A. Gould; *V. President,* Dr. H. L. Sabin, Williamstown: *Corresponding Secretary,* Dr. W. E. Coale; *Recording Secretary,* Dr. C. D. Homans; *Librarian,* Dr. J. C. White; *Treasurer,* Dr. Francis Minot; *Orator,* Dr. B. E. Cotting; *Anniversary Chairman,* Dr. W. E. Coale.

Dr. Francis Minot, Treasurer of the Society, presented his annual report. The receipts for the year have been $14,673 69; the expenditures $14,232 37; leaving in the treasury $441 32. The present indebtedness of the Society is $2,207 40; and the value of fund and cash property is $31,130 49.

Dr. John Green, of Boston, read a paper on the substitution of straw for splints in cases of fracture.

Dr. Bowditch gave an eloquent eulogium on the late Dr. John Ware.

The Chair appointed the following delegates to other State societies:

New Hampshire.—A. B. Hall of Boston, Henry C. Perkins of Newburyport.

Maine.—George Fabyan of Boston, Jonathan Ware of Milton.

Vermont.—H. I. Bowditch of Boston, T. R. Boutelle of Fitchburg.

Connecticut.—George C. Shattuck of Boston, Calvin P. Fiske of Fiskedale.

R. Island.—H. W. Williams of Boston, Josiah Bartlett of Concord.

New York.—H. H. Childs of Pittsfield, David Miller of Pittsfield, C. T. Collins of Stockbridge.

New Jersey.—John Homans of Boston, B. E. Cotting of Roxbury.

Dr. John Ordronaux, of New York, addressed the Society on the condition of the medical profession in the city of New York. He gave an interesting account of the various hospitals and medical schools of the commercial metropolis, setting forth the great advantages which they afford for the training of students in medicine, and explained the action of the State with reference to the military exigencies of the present time, by which their regiments are now supplied with a body of competent surgeons, equal to any in the field. He paid a feeling tribute to the members of the profession who had fallen in the service of the nation, and closed by returning his thanks for the hospitality which Boston had extended to him now and heretofore, which he should long carry with him in his memory, as evidence of days well spent.

At the request of the Society, Dr. Ordronaux also gave his views, quite in detail, of the various provisions which should be made by the Government for the care and support of the numerous invalid soldiers which the war would leave upon their hands. He thought that the nature of our institutions and our government called for an entirely new system of arrangements for this purpose, and he proceeded to unfold several plans which seemed to promise favorably for the desired purpose.

At the close of Dr. Ordronaux's remarks, Dr. N. B. Shurtleff read the report of the Library Committee, which represented the library as in a thriving condition.

At 12 o'clock, Dr. J. M. Warren was introduced as the annual orator, and occupied about an hour in the delivery of a well-prepared address on the history of surgery for the past thirty years, during which period, he remarked, a long series of splendid discoveries had completely changed the whole aspect of medical science. Of these Dr. Warren gave a hasty review, stating that within the limits of his address it was impossible even to enumerate the improvements made. The collection of medical statistics, which formed a part of the labor of the age, was an important duty, and would add a valuable feature to our literature.

Dr. Warren concluded by fitting mention of the medical martyrs of the war, and a eulogy on the wise forethought of the Governor in establishing a rigid test of medical fitness for surgeons under his appointment.

By vote of the Society, Dr. Ordronaux was requested to reduce to writing his remarks on the treatment of disabled soldiers, in order that they might be incorporated in the records of the Society. Dr. O. expressed his willingness to comply with this request.

After a vote of thanks to Dr. Warren for his able address, the Society adjourned at 1½ o'clock, and the members and their guests repaired to the Revere House to partake of a collation.

At 2½ o'clock Dr. Henry J. Bigelow called the company to order in one of the private parlors of the Revere House, and welcomed them to the hospitality of the Society as follows:—

Gentlemen of the Massachusetts Medical Society,—In behalf of the Committee of Arrangements, most of whom have had more experience than myself in directing the details of your anniversaries, I am requested to say, that with a view to promote the social enjoyment of this occasion, they have decided to omit the usual public speaking; and it has been ingeniously contrived that your unfortunate anniversary chairman should bring home to your conviction the wisdom of this decision, by detaining you at the present time from your dinner with a few remarks to be taken on an empty stomach. It was once the custom on the occasion of an assemblage like the present, that men should eat and drink until the whole system responded to the genial and harmonizing influences of kindly and comfortable feeling, and then the key-note of fellowship once sounded was echoed from every side in tones of glowing eloquence. Your own Medical Benevolent Society opens its pockets and warms the cockles of its heart over the social board, and the Humane Society of Massachusetts burns a great deal of good tobacco before it can vote a little bad tobacco smoke in the attempt to save a drowned man from dying. But the age of progress is upon us. The spirit of reform which has conjured the strength from your goblet holds this very night its solemn anniversary to conspire against the fragrant leaf; and unless you rally in defence of your rights, the progress of another year may refresh you with a speech before dinner with no dinner after the speech. Four years have elapsed since we assembled in this city. The bounteous hospitality of our western friends, who at its last anniversary entertained this Society among the laurel-covered hills of Berkshire, came to us like quails and manna after long fasting. We of this Society have had our private foe and our tedious litigation, and we like other litigants have gained a victory only when our finances were exhausted, starvation stared us in the face, and we had summoned to the field our reserved and chosen men.

Who could foretell when we were last here assembled, the terrible and wide-spread calamity, the sacrifice of precious life, the blood and carnage that, following in the track of a relentless civil war, should summon our brethren from their round of peaceful civic duty to staunch the life-blood of the country dripping like water on the field of battle. Striving to save the lives of others at the hazard of their own, one amputating at the shoulder-joint under the trees at Newbern while the branches torn by balls are falling upon the wound itself; another at the distant sanguinary field of Shiloh; others perhaps at this very moment hastening to the front to succor their bleeding countrymen upon the reeking soil of Virginia.

Shall we forget him who in the maturity of his years and the fulness of experience, came with the ardor of a stripling to the dissecting-room, that he might renew for the service of his country his long-forgotten skill; who in a few weeks sent home, as if in token of his earnest work, the cannon-ball that came red hot across the Potomac to fall in front of his tent, and who after months of invaluable service, died a victim to his indomitable perseverance;—or yet the bright memory of that pure and single-hearted youth who left behind the brilliant professional future of his home and a claim upon the regards of this community, inherited from one now, alas! no more, to minister that noble charity which is the freewill offering of a grateful people to their brothers battling and falling in their defence; who, when for a second time, from a conscientious conviction of duty, he repaired to the scene of strife, deprived by the exigencies of a siege of his rightful aid, fell a martyr to his noble single-handed efforts to relieve the sick and suffering of that gallant garrison.

Let us avow our gratitude to those who have labored faithfully at home; to the Medical Commission of Massachusetts, who have so well represented us in summer and winter, without other compensation than that which comes from a conscientious discharge of duty; and whose careful discrimination has gone far to determine the high professional standard of Massachusetts surgeons in the field. We are proud of the able and urbane administration of our Surgeon-General, emphatically the right man in the right place. And, lastly, we will not fail here to recognize our obligation to the eloquent statesman, who, amid the harassing daily toil of office, at a moment when the exigencies of the country allowed no relaxation of vigilance nor respite from official duty, yet found time to respond to the claims of our profession in the able, discriminating and high-toned address to the students last graduated in medicine. Posterity will not forget the man at the sound of whose clarion voice the gallant sons of Massachusetts mustered first in the field, wheeled into the front line, the vanguard of the great national army, and marched, like the men of Concord and Lexington, to vindicate their principles and their hereditary glory.

We meet to honor the festival of a Society second to none in the loyal devotion of its sons, and which for more than three quarters of a century has frowned in silent dignity upon all that was false to human knowledge, absurd in science or unworthy in individual action. We have yet among us one of those earlier members, to whose good influence and able guidance it owes most, and whose own life has been a witness to the spirit of truth and justice which conceived and nurtured our Society. From such ancestry we have received our escutcheon untarnished, and as we are living men, we will transmit it to our sons, unsoiled at least by any compromise with voluntary ignorance and error.

I offer you now and here a heartfelt welcome ; you who have rallied on this occasion from every hill and plain and every valley of our noble State, from the Atlantic shore to the mountains of Berkshire ; you who at home, hunted and persecuted like the early Christians, seek here a brief respite from your professional labors, heedless of the breathless messenger and reckless of the midnight alarum, once more to meet the old allies of years gone by, to initiate new friendships, and to extend to each other a warm and cordial greeting. We may not know or see every man the other, but we feel a mutual interest as fellow laborers in a common cause. To most of us it seems but yesterday that we subscribed the roll of membership and entered the hallowed precincts of medical freedom and equality, to gaze with reverence on the gigantic strife of the panoplied and well-instructed veterans who met in those glorious days to do annual battle over the by-laws of the Society ; until, incited by the strife, we came to hope that somebody would tread on our particular toe that we might have our private wrongs to redress. Not until years had rolled by did we discover that the maturer fruit often lost something of its acidity, and that art, science, humanity, medicine itself, flourished better under the genial auspices of peace and liberal forbearance.

We have strode along the path of professional life, our eyes fixed on the friendly image of those who went before, watching them, as one by one they dropped below the horizon, until we find that we ourselves are standing under the zenith. Our advance from youth to age is but too palpable on the evidence around us. The beardless youth of yesterday, anxious about his daily bread, and bearing with complacent fortitude even the indisposition of his friends, now finds himself burdened with an overwhelming practice ; and perhaps surrounded with a growth of sturdy saplings, is buttressed like a banyan tree into the very fabric of society ; or perhaps has already watched with parental solicitude a tender flower led by a stranger from her father's fireside, and while he fondly mused, was startled from his reverie to find his young brow ornamented with the silver honors of a grandfather ;—or more than one other has sent his first born to the battle-field and has bid him Godspeed, never again to look upon his living face. If it be permitted to us here respectfully and tenderly to lift the veil of private sorrow, we would render to such, all our gratitude and all our sympathy for those gallant, noble sons, who have fallen, sword in hand, fighting for our rights and for the cause of human liberty.

The great political cyclone, which in its gigantic whirl has made the South a desert, and which so lately threatened, before the autumn should have passed, to convulse even the steadfast North, may be, in God's great plan, but as a passing summer shower, to wash and purify this western hemisphere. May we not hope that when we meet again, though the sky may still be dark and the waters not yet dried up, we may see the clouds breaking and the horizon glittering with the beams of peace ; and, high aloft, rolling and flashing in the new-born light, the flag of our fathers resplendent with every northern and with every southern star.

After music by the Germania band, who discoursed upon this occasion some of their best operatic selections, the chairman again rose and introduced His Excellency Governor Andrew, with the following words :—"It has been well said, that, 'Turbulent times bring forth great men.' We are honored to-day with the presence of one, who, elected during a time of peace, to the highest office in the Commonwealth, has since borne, with proud distinction to himself and to the State, her battle-flag, nobly vindicating its legend, 'Peace after victory and liberty.'"

Governor Andrew excused himself from a formal speech, not having had a moment's time for premeditation. Nevertheless, he could not refrain from responding to the compliment paid him by the chair—a compliment attributing to him higher merit than he had ever thought of attaining to. He was much indebted to the members of the Society for the support which they had given him. The confidence with which fathers and mothers sent their sons to the field was in a great measure owing to their faith in the skill of the surgeons sent out with the approval of members of this Society. He could claim but little credit for himself in making these appointments.

When Governor Andrew had concluded his remarks, the company were ushered into an adjoining room, and invited to partake of an excellent collation. After this had been satisfactorily disposed of, Dr. Bigelow called on Dr. O. W. Holmes, who read a fine poem in memory of the late Dr. John Ware and his son Dr. Robert Ware.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, May 28th, 1864.

DEATHS.

	Males.	*Females.*	*Tota*
Deaths during the week - - - - - - -	58	45	103
Ave. mortality of corresponding weeks for ten years, 1853—1863,	39.1	36.3	75.4
Average corrected to increased population - - - - -	00	00	82 86
Death of persons above 90 - - - - - - -	0	1	1

The list of publications received, &c., is deferred till next week.

Deaths in Boston for the week ending Saturday noon, May 28th, 103. Males, 58—Females, 45.—Accident, 1—apoplexy, 1—disease of the bowels, 1—inflammation of the bowels, 2—congestion of the brain, 1—disease of the brain, 2—bronchitis, 2—cancer, 2—consumption, 21—convulsions, 3—croup, 3—cyanosis, 1—debility, 2—diphtheria, 1—dropsy, 3—dropsy of the brain, 4—erysipelas, 2—remittent fever, 1—scarlet fever, 6—spotted fever, 1—typhoid fever, 2—hæmorrhage, 1—disease of the heart, 5—hip disease, 1—infantile disease, 2—injured at birth, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 5—marasmus, 2—measles, 1—old age, 3—paralysis, 1—pleurisy, 1—scrofula, 1—smallpox, 4—suffocated, 1—suicide, 1—syphilis, 1—unknown, 6.

Under 5 years of age, 42—between 5 and 20 years, 16—between 20 and 40 years, 21—between 40 and 60 years, 13—above 60 years, 11. Born in the United States, 74—Ireland, 22—other places, 7.

THE

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CASES OF OVARIOTOMY.

By G. Kimball, M.D., of Lowell, Mass.

[Communicated for the Boston Medical and Surgical Journal.]

The following sketches of operations for the removal of ovarian tumors relate to nine instances of the kind that have occurred in my practice during the last twelve months. Other cases of mine, of previous date, I intend publishing at a future day. I should have published them before, had I not reason to suppose that, before this, some account of them might appear from another source.

Case I.—Miss D., of Dedham, 25 years of age, unmarried, of healthy, but delicate constitution, discovered, some time in the course of the year 1860, a slight swelling situated in the left side of the lower portion of the abdomen. It increased slowly, but constantly, giving her the idea that the case was one of "common dropsy." In April, 1862, she was tapped, but the nature of the disease was not yet understood. Upon a return of the enlargement, she consulted Dr. Warren, of Boston. He readily made out the nature of the case, declaring it to be ovarian ; but proposed no method of cure. The December following, nine months from the first tapping, the same operation was repeated. After this, she was under the care of a homœopathic physician till she consulted me, the following March.

It being a question whether the case was such as would justify extirpation, I had no hesitation in saying that, *apparently*, it was as favorable for such an operation as any I had ever seen. In accordance with this opinion, the operation was at once resolved upon, and accordingly submitted to, on the 13th of May, 1863. There being no adhesions, or other complicated circumstance in the case, the operation was accomplished in a very few minutes. The tumor consisted of a single cyst, and, having been first evacuated of its contents, was drawn out from the abdomen through an incision not more than four inches in length, in the median line between the umbilicus and pubes. The pedicle being too short to admit of a clamp, it was embraced in a double ligature, being first transfixed and each half tied separately. The tumor was next cut away, and the stump of the pedicle retained between the lips of the wound, with the cut surface on a level with the skin. The dressings consisted simply of three or four adhesive strips across the wound, and a compress moistened with warm water and laudanum. Upon returning to consciousness from the insensibility produced by the ether, the patient complained of severe pain in the back, attended with sickness and vomiting. This being no unusual occurrence in similar cases, it occasioned at first no special anxiety; its persistency, however, and increased severity, notwithstanding large and repeated doses of morphine, led to the suspicion that the cause of the difficulty might be in the fixed and stretched condition of the pedicle. I therefore cut away the stitches that held it to the integuments, allowing it to drop within the peritoneal cavity. The relief was instantaneous, and followed by several hours of quiet and refreshing sleep.

For four days following the operation, the condition of the patient was most satisfactory; on the fifth, she became feverish, and complained of pain in the lower part of the abdomen. It was soon relieved, however, by a sudden and unexpected discharge from the wound, of a large quantity of offensive matter, occasioned, probably, by the necessary sloughing of the ligatured portion of the pedicle. This discharge continued, in a greater or less quantity, for several weeks, but in no essential degree interfering with a regular improvement, which finally resulted in perfect recovery.

Case II.—Mrs. W., of Wayland, 36 years of age, of good constitution, but had never borne any children. Ovarian enlargement was first noticed thirteen years ago, but occasioned no great inconvenience till within the last five or six years. During this period it affected her health seriously—as she expressed it, "taking her strength and her life away." She once consulted Dr. Hayward, of Boston, but had no encouragement to submit to an operation. As for medical treatment, she wisely avoided it altogether.

About the first of June, I was called upon to examine the case, and give my opinion as to the expediency of the operation of extirpation. I judged the case favorable for a good result. On the 20th of the same month, the operation was accordingly performed. The tumor consisted of a single cyst, containing nearly 50 lbs. of watery fluid, perfectly limpid, and without albumen. The method of operating was precisely the same as that described in the foregoing case. Weight of tumor, including fluid, about 50 lbs. The recovery in this case was uninterrupted by a single unfavorable symptom. She left her bed in four weeks—and in ten weeks, visited her neighbors. She now writes me, March 22d, 1864,—"It is now just nine months since the operation, and I am perfectly well, though I have not entirely regained my strength."

Case III.—Miss P., of Plymouth, 37 years of age, of excellent constitution, and of good general health, had been suffering from an enlargement of the abdomen, for the last thirteen years, supposed to be a "common dropsy." Various and abundant medicines had been taken, but without the slightest relief.

Accidentally falling in with a young lady from whom I had removed an ovarian tumor but a short time before, she was led to suspect her own malady to be of a similar character; consequently, early in the month of September last, she called upon me for my opinion and advice in the case. The nature of the difficulty was unequivocally marked, and, so far as could be determined, it consisted of a single ovarian cyst, very large, and evidently beginning to produce the peculiar effects incidental to the advanced stages of the disease. It being also her purpose to learn my views as to the safety of an operation, I could only say that, so far as could be foreseen, everything indicated that the result of such a procedure would be successful. Several weeks after, she informed me that she had resolved to have the tumor removed; and, in compliance with her appointment, on the 15th of October the operation was performed, Drs. Jackson and Gordon, both of Plymouth, kindly assisting. Details as to the manner of operating, &c., are unnecessary—since, in every respect, they were the same as have been already given in the two preceding cases. The tumor was very large, weighing, fluid and all, about 60 lbs. One third of a grain of morphine, given the first night after the operation, constituted the entire medical treatment through the whole period of recovery. By recent information, I understand that the health of the patient is now perfect.

Case IV.—Mrs. S., of Lancaster, N. H., a healthy lady, 31 years of age, discovered, about three years since, a small tumor in her right side, immediately above the hip bone. Its growth was slow, but constant, occasioning, at first, but slight inconvenience; but latterly, the usual discomforts resulting from the advanced development of ovarian disease: to wit, more or less pain in different parts of the abdomen, a sense of weariness, loss of strength and appetite, emaciation, &c. Some months previous to my seeing her, she consulted Dr. ———, of Boston. The characteristic evidences of the disease left no question as to its nature, and she was advised to take, as a remedy, the bromide of potassium. To the patient's inquiry as to the expediency of the removal of the disease by an operation, she was earnestly advised not to risk it. The objections to the operation were set forth so earnestly, and the chances of surviving it, if submitted to, were represented so few, that she returned home with the sad conclusion that her case was entirely hopeless. The bromide of potassium was faithfully tried, however, and only abandoned when it became quite certain it was doing no good.

Early in December, I was consulted. She had been tapped four weeks before, and relieved of 30 lbs. of albuminous fluid from a single cyst. The beneficial effect of this operation was only temporary, the cyst having already refilled to two thirds its former size, while, at the same time, other circumstances concurred in showing that the system generally was becoming seriously impaired. The removal of the disease by an operation being the question upon which I was expected to give an opinion, I had no hesitation in saying that the case *seemed* to be one that afforded a reasonable promise of success. Encouraged by this opinion, the operation was at once determined upon. Three weeks after, I was sent for to visit the patient at her home; the next day the tumor was removed.

According to my usual habit, I commenced the operation by making an explorative opening, between the umbilicus and pubes, merely sufficient to ascertain if there were adhesions. It was at once found that these existed, but apparently not to a sufficient degree to seriously embarrass the operation. It was soon discovered, however, as the operation progressed, that the attachments of the tumor to the walls of the abdomen were more extensive than had been supposed; also so firm as to require a good deal of force to break them down. The difficulty was overcome, however, without the use of the knife, and thus the bleeding, which otherwise might have been serious, was essentially obviated. The detaching a small portion of adherent omentum was attended with some bleeding, and required the application of a ligature. There was no attachment to other organs. The tumor was cut away after the pedicle had been first secured by a clamp. Two stitches, one above and the other below the stump of the pedicle, were all that was necessary to close the wound, which was afterwards dressed in the usual manner, with long strips of adhesive plaster, and a compress wet with warm water and laudanum.

During the first twelve hours after the operation, the patient suffered considerably from pain, especially in the back. It was subdued, however, by a liberal dose of morphine, so that by five o'clock the following morning I left her in a comfortable condition.

After this, the case went on favorably under the judicious management of her family physician, Dr. Barney; not an unpleasant symptom occurring throughout the whole period of her recovery. At present she represents herself in good health, better, even (excepting that she has not yet fully regained her strength), than for two years previous to the operation.

The important feature that distinguishes this case from the preceding ones, consists mainly in the circumstance of *adhesion;* showing, as it does, that notwithstanding this complication, the operation may result most favorably, and without the slightest indication of either local or constitutional suffering—realizing, in fact, the statement that has been sometimes made, that so long as the *vital organs* are not involved, adhesions may not be regarded as important obstacles to a good result.

On another account, this case is particularly satisfactory. Not only has a valuable life been saved, but it has been saved by an operation most strenuously opposed.

With these constantly accumulating instances of success, it is to be hoped that the vain opposition still so earnestly waged by some against ovariotomy will soon cease; or, at least, that the operation may be allowed to hold equal favor with others whose record of results is far less favorable, yet whose legitimacy is never brought into question.

[To be continued.]

PERMANGANATE OF POTASH IN CEREBRO-SPINAL MENINGITIS.

By Dr. Isaac Kay, of Springfield, Ohio.

[Communicated for the Boston Medical and Surgical Journal.]

Having seen several articles in the Boston Medical and Surgical Journal lately upon spotted fever, or, more properly, cerebro-spinal meningitis, as it prevails in and about Boston, I am prompted to contribute a few lines in regard to its appearance here in the West. During the last six months, cases of the disease, mostly in children, have occurred in various parts of Ohio, Indiana and Illinois, and although the symptoms seem to have been essentially the same everywhere, yet the malady has been variously named by the people and physicians of the different localities in which it has made its appearance. Malignant scarlet fever, spotted fever, and cerebro-spinal meningitis, especially the latter two names, have generally been applied to it. In some neighborhoods it has carried consternation equal to that which formerly attended the visitations of cholera.

About the first of January last, this city was visited by what we now consider to be this disease, in the family of a Mr. D., whose daughter, aged 18 years, and son, aged 10 years, were attacked with violent fever and evident congestion of the nervous centres, and both died after an illness of about three days. They were both corpses in the house at the same time.

Jan. 10th, Mr. A., bridge-builder, a large, healthy, athletic man, was taken with a slight chill, soon followed with fever and pain in head and neck. In less than six hours delirium set in, which required an attendant or two to keep him in bed. This excitement in forty-eight hours subsided into a quieter form, such as low muttering and expression of strange fancies. His decubitus was on the back, with head somewhat thrown back, and the oppression of the nervous centres was such as to give him at times but little respiratory power, the tongue falling back into the throat so as to make it necessary betimes to change his position on his side. Pulse generally over 120. After treatment of the usual antiphlogistic character, he died, four days after the attack.

In a day or two after this case terminated, two of Mr. W.'s children, of this city, were attacked with what I consider the same disease, both dying in less than forty-eight hours.

Shortly after the death of these two cases, Mr. Williams's family, of this place, was invaded, and in about one month *five* of his children, all under 13 years of age, died, one after the other, with intervals of one, two, four, seven, eight, and ten days.

During the progress of the last mentioned cases, the child of Mr. D. died suddenly, and a post-mortem examination of the case was made, conducted mainly by Dr. Dunlap, of this city. This examination revealed an excessively engorged state of the meninges of the cerebellum, medulla oblongata, and cervical portion of the medulla spinalis. The appearance of these parts was such as confirm the pathologists who have named the disease cerebro-spinal meningitis.

One peculiar symptom in most of these cases among children, is the great rapidity of the respirations, sometimes ranging from eighty to one hundred and ten per minute. In most of the cases which have come under my observation, especially of children, the patient would lie with the head thrown back as far as possible, and nothing would induce them to bring it forward, until the case began to improve. Otherwise this position would be maintained until death. In regard to the management of these cases, I will merely observe that the whole catalogue of antiphlogistics, and tonics, and various preparations of chlorine, were used, without, as I think, any beneficial result. That the treatment used was ineffectual to a very distressing degree, may be appreciated when I state that out of the first twenty cases in this city and vicinity, only one recovered, and that, too, with deafness and other serious impairment of the system. In the case which recovered, copper-colored spots about the size of a split pea made their appearance on the second day, and remained on the body for nearly two weeks. These spots in many cases did not become very distinct until after death. But they were so often absent altogether, as to make the name of spotted fever quite objectionable in point of truth.

After these first twenty cases had occurred in and about Springfield, and terminated as stated, I was called to see Mr. George Johnson, aged 22 years, and a member of the 44th Ohio Volunteer Infantry, who was seized with a strange and to him unusual sense of oppression in the head. In a few minutes after the onset of these feelings, he fell senseless upon the floor and had to be carried to bed, where he remained for thirty-six hours, most of the time so wildly delirious as to require several persons to keep him in bed. In a few hours after he was carried to the bed, the lungs began to labor under unmistakable symptoms of intense congestion. Breathing was very difficult, and large quantities of very bloody mucus were thrown up by a hurried cough and spasmodic emesis. At the suggestion of Dr. Dunlap, who was called upon to see the case with me, the patient was given the solution of permanganate of potash, one grain to the ounce of rain water, of which solution one tablespoonful every hour was given. The vomiting ceased almost immediately, and the brain, in less than one hour, was considerably relieved of congestion, and the patient, after lying for three days in a partially delirious state, began very rapidly to recover, and in five days could walk about the city. Permanganate of potash, in the dose above mentioned, every hour, with occasional doses of opium to quiet the delirium, and an application of cold, wet cloths to the occiput and over the cervical vertebræ, constituted the only treatment.

The next case in which this treatment was used, was that of Milton Cole, aged 18 years. He was attacked with a slight chill and darting pains through the brain, which in a few hours rendered him quite delirious. The pain finally settled into the back part of the brain, and in the region of the cervical medulla spinalis, drawing the head back upon the neck. Pulse 130 per minute, and delirium almost equal to mania a potu. Numerous efforts were made to vomit, but little was thrown up. During the first two days there were cramps of the legs and constant changing of position in the bed, and from the bed to the chair, and a desire to go out of doors. A homœopathist was called in to see him on the first day, and pronounced it "typhoid fever of the brain," and said that he would undoubtedly die. Immediately upon seeing him next day, I commenced giving him the solution of permanganate of potash every hour, alternating with half a grain of opium until the patient was quieted, after which the solution was continued alone until the delirium required the nervous sedative. This treatment alone was pursued for one week, when all the unpleasant symptoms left him, and a rapid convalescence followed.

Since the adoption of this treatment here, the statistics show that over three fourths of the cases have recovered. One thing we observed particularly in regard to these cases, viz., a great intolerance of purgatives. On account of this intolerance, we deemed it better to let the patient go for three or even four days without a movement of the bowels, rather than resort to cathartics. No harm seemed to result from this course, and, notwithstanding the large quantities of opium used, we found one tablespoonful of castor oil sufficient in all cases to move the bowels. Castor oil, with a small quantity of turpentine, was given frequently after convalescence had set in, to clean off the tongue, which was generally covered in the centre with a heavy brownish coat, with red glazed edges.

These crude and imperfect notes and remarks are thrown out to the profession for what they may be worth, and with the view of eliciting still further observations on a disease which is causing some panic in various parts of our country.

ON A CASE OF SPONTANEOUS THROMBOSIS IN THE LEFT FEMORAL AND SAPHENA VEIN.

By H. M. Tuckwell, M.D.

A. B., aged 33, has previously enjoyed good health; during the past year has allowed himself but little rest in his profession, and has become thoroughly overworked. His present illness commenced about a month ago with severe pain in the head, which lasted five or six days without intermission, and left him much weakened. The pain then shifted to the loins, and continued there for two weeks, during which time he was extremely depressed and unable to get about. At the end of this time, rather more than a week ago, he was attacked suddenly in the night by a violent pain in the right side, which seems to have been purely neuralgic, for no signs of pleurisy could be detected at the time; this pain continued for three days and nights, during which time *he lay continually on the left side,* without sleep, and taking no food, till, on the fourth day, it left him almost as suddenly as it had come on. On attempting now to change his posture he found that the left leg was quite numb, that sensation began to return after rubbing the leg for a time, but that, with returning sensation, there came on an intense pain in the lower part of the leg, more especially in the calf; that he soon observed the leg and foot beginning to swell; that the swelling gradually involved the whole leg, and extended up the thigh to the groin, the pain becoming generally diffused and intensified as the swelling extended and increased. I saw him on the fourth day after the swelling had commenced, when the following appearance presented itself:—

He is extremely prostrate, unable to raise himself in bed; the eyes hollow; the voice low and changed: skin generally cool, except that of the left leg, which is abnormally hot; pulse 60, very small, thready and irregular, intermitting at every third beat; thorax generally resonant on percussion; respiration feeble, but free from any morbid sound; urine natural. The left leg, from the groin to the toes, is enormously swollen, pitting everywhere deeply on pressure, its surface is hot and very sensitive; an indistinct hardness can be felt through the œdema along the course of the femoral and saphena vein as far as Poupart's ligament, above which point it cannot be traced; beneath the œdematous integuments large superficial veins are seen ramifying along the anterior and outer aspect of the thigh.

Diagnosis.—Thrombosis of saphena and femoral, perhaps of external iliac vein.

Treatment.—To relieve the pain, cold was applied to the whole limb in the form of evaporating lotions, and the limb was supported on pillows. Small quantities of brandy and wine were administered, with milk and beef-tea.

On the day following, Mr. Savory saw the case with me, and gave me the benefit of his valuable opinion. He fully concurred in the diagnosis, but advised that the leg should be wrapped in cotton-wool, and pressed upon me most forcibly the necessity of increasing the quantity of stimulants, bidding me, to use his own words, "measure the quantity not by the glass or bottle, but by the effect produced." From this time, brandy, rum, port, sherry and champagne were given every two or three hours day and night, till, on the sixth day from the time that I first saw him, he was taking, in the twenty-four hours, brandy, ℥ zij.; rum, ℥ xij.; wine, ℥ xx. The effect of this on the pulse was as follows:—It rose from 60 to 94, the intermissions at the same time becoming less frequent, and the volume better and better, till, on the tenth day from the time that the stimulants were first given, and while he was still taking the above quantity, *it fell to* 84, and ceased to intermit. His general condition improved, *pari passu,* with the pulse. At the request of the patient, I returned to the cold applications, after having made fair trial of the cotton-wool, and found that it made the leg uncomfortable, while the cold relieved the pain in a marked degree. On the twelfth day, the pain having quite subsided, while the swelling remained unchanged, the leg was carefully rolled in flannel bandages, moderate pressure being at first employed and gradually increased, and it was swung from a fracture cradle, with the foot slightly raised. This was continued during a period of seven weeks, at the end of which time the swelling had entirely disappeared. It may be remarked, that the œdema subsided rapidly for the first week after the application of the bandage, but then seemed, for a time, to remain stationary, and was at last slowly removed. The quantity of stimulants was gradually reduced after the fourth week.

He has now recovered his health, can walk two or three miles in the day, but still finds, after a walk, that the leg and foot feel heavy, and that the veins in the foot become, in spite of a lace-stocking, considerably distended. There is now nothing abnormal to be felt or seen in the thigh in the region of the large veins, nor is there any visible enlargement of the superficial veins there.

Remarks.—The occurrence of spontaneous coagulation in the living veins, simply as a result of nervous debility, independently of the puerperal state, of fever, or of any wasting organic disease, as phthisis, cancer, etc., is, seemingly, a rare phenomenon. On reading through Virchow's masterly paper on the subject, I cannot find, among the many cases of thrombosis there enumerated, one exactly similar; nor is there in Cohn's monograph one case in which there was not either some organic disease or fever to account for the coagulation. Not that I wish to instance this case as one whose pathology is distinct or special, for the so-called "Marantischer Thrombus" of the Germans, or clot that forms in wasting diseases, is, as Virchow has shown, dependent primarily on the same cause,—an enfeebled state of the heart's action; but the disease here presents peculiar interest, in that there was an absence of any dyscrasia or fever which might be supposed to give rise to the formation of a thrombus by altering the composition of the blood; it shows that to a feeble heart alone may be attributed all the symptoms and signs of the worst form of "phlegmasia dolens." It may be urged by some, in contradiction of this assertion, that phlebitis was here the real cause of the coagulation; but a careful observation of the way in which the disease showed itself seems to me to afford convincing evidence that no phlebitis whatever was present, and thus to confirm still further the doctrines of Virchow. The rapid development and extent of the swelling certainly point to a primary obstruction of the main venous trunk in the thigh. Now, if this obstruction had been due to phlebitis, surely the first symptoms of pain and swelling would have been noticed in the immediate neighborhood of that venous trunk, whereas nothing of the kind was observed. The swelling and pain commenced in the leg and foot, and extended, last of all, to the thigh; nor was there at any time marked pain, along the course of the obstructed vein, distinct from that felt all over the leg. Besides, the general symptoms were not those of an acute inflammatory process; the skin of the body, generally, was cold, and the pulse quite unlike that of inflammation. The conversion of the saphena and femoral vein into a solid tube by coagulation of their contents, is quite sufficient to account for the hardness felt along their course.

John Davy and Gulliver were the first to notice the frequent occurrence of clots of this kind in the veins of those who had suffered from chronic diseases, with failing circulation and great prostration of the vital powers. After them, Hasse and Bouchut turned the attention of pathologists still further in this direction. But to Virchow must be awarded the largest share of praise, for he it was who first cleared away the mists which enveloped the whole subject; he showed, by repeated experiments and post-mortem examinations, that the doctrine of phlebitis, first promulgated by John Hunter, is erroneous; that the coagulation is not preceded by inflammation of the vein, and that there is no exudation on the free surface of its inner coat which determines coagulation; but that, through failure of the heart's power, the blood current is retarded and finally stagnates, and that the starting-point for coagulation is at the point of junction of the valve with the wall of the vein, the valve here (like the chordæ tendineæ in the heart) acting as a foreign body, and furnishing a centre round which the stagnant blood coagulates.

It is worthy of notice that, in circumstances predisposing to thrombus formation, a long continuance in one posture seems to favor the occurrence of the phenomenon, and that the side to which the patient inclines is often the side on which the clot forms. Virchow dwells upon this, and relates cases which corroborate the statement. Cohn has observed the same; he mentions one case in particular—a case of Bright's disease with effusion into the right pleura—where the patient lay continually on the right side and right arm, and where the whole right arm became œdematous from the formation of a thrombus found after death in the subclavian vein.

The contingencies to be feared in these cases are, first, that the heart may not be able to recover itself, and that death by asthenia may follow rapidly; secondly, that erysipelas may set in, followed by diffuse abscess, or even gangrene; thirdly, that a portion of the clot may be detached and washed into the pulmonary artery, causing sudden death; fourthly, that the clot may undergo the so-called retrograde metamorphosis, may soften and break down in its interior, and that this softened, ill-conditioned fibrine may be carried into the general circulation, and cause death from pyæmia. The heart must regain its lost power, and the clot must undergo a healthy process of organization, before anything like a favorable prognosis can be given.

The question then arises as to how the circulation is re-established; the answer to which is, by the formation of collateral channels, if the vein be completely obliterated by the organized clot. But it may also happen that the canal of the obstructed vein may in part reopen; that the clot, during the process of organization, may shrink away from one wall of the vein as it becomes adherent to the other; and that the blood may flow on again in its original channel, now of necessity much narrowed by the changes that have taken place. It is probable that the latter has occurred in the case related, from the fact that there are no large superficial veins visible.

The circumstances of principal interest in the treatment employed are, the beneficial effect of cold, the value of pressure, and the necessity of stimulants.

The application of cold—a remedial agent so largely employed in Germany—is strongly recommended by Virchow as the best and often the only means of alleviating the terrible pain that follows the sudden obstruction by an embolus of one of the large arteries of the extremities. The relief it afforded in this case was most marked. Pressure carefully applied and gradually increased by means of a flannel bandage—a plan of treatment employed by many obstetric physicians in the later stages of the puerperal phlegmasia dolens—was here, too, attended with good results. The rapid and manifest improvement in the general condition of the patient, and the restoration of the heart's power in proportion as the quantity of stimulants was increased, sufficiently indicate their importance in the treatment of such cases. And, surely, if alcohol acts thus beneficially after the mischief has been done, we cannot avoid the reflection, that the free use of alcohol in wasting diseases may often avert the mischief altogether, and that the stimulant plan of treatment has, at any rate, this much to be said in its favor, that it tends to prevent the formation of thrombi. In the history of this disease we have, certainly, one satisfactory example of the way in which a real advance in pathology leads to a corresponding advance in therapeutics.—*Medical Times and Gazette.*

[The preceding article has been transferred to our pages of selected papers on account of its practical interest, and that we might call anew the attention of readers to a class of important cases, to which that above recorded belongs, and instances of which now and then occur with disastrous results in the practice of every physician.

Sudden death from fatty degeneration of the heart is but a single consequence of the influences which, operating in a less degree, produce results similar to those recorded by Mr. Tuckwell. A number of striking instances have been related in this JOURNAL, on various occasions, where patients died suddenly, or came near it, solely from the inefficiency of the muscular power of the heart to propel the blood to the brain, the syncope consequent thereon terminating fatally or nearly so. Other cases illustrating this mode of death have from time to time been reported as following the sudden rising from the recumbent to a sitting posture of females recently confined; the muscular force of the heart, weakened by the exhaustion incident to pregnancy and its attendant loss of blood, proving unequal to the task of the circulation; or, what practically amounts to the same thing, the volume of circulating fluid being greatly diminished and altered, becomes an inadequate stimulus to the heart, which thus fails to drive the blood to the brain, against gravity, in sufficient quantities for the sustenance of the nervous influence upon which its contractile power depends; syncope, therefore, takes place and not unfrequently proves fatal. Mr. Tuckwell points out in his paper other accidents consequent upon this condition of the heart. In the case narrated, an arrest of a portion of the circulation was produced by the influences we have described. The bearing of these upon the production of phlegmasia dolens is also distinctly alluded to. As interesting in this aspect of the subject, we desire to mention the following case.

A patient, recently under our charge, was confined in November last. Naturally healthy and robust, the care of children and household responsibilities, none of which her energetic disposition would allow her to delegate to others, had enfeebled her health and reduced her strength to a state ill qualified to bear the further exactions of an increasing family, or to resume at so early a period as inclination prompted her domestic duties. After a slow convalescence, and contrary to advice, she again, however, returned to her active habits, long before her anæmic and exhausted condition warranted. Early in February a small felon formed on one of her fingers; a fortnight later, a little, indolent abscess gathered in one of her breasts, and a week afterwards she complained of pain and swelling about her ankles. On examination, several tender and indurated nodosities were detected in the course of the superficial veins of both legs, below the knee, chiefly in the vicinity of the ankle. These were sufficiently raised above the surface to be visible in profile, surrounded by a circumscribed deposit of lymph, pitting upon pressure and marked by a trifling redness, which subsequently became slightly ecchymosed. This condition was unaccompanied by any febrile or constitutional disturbance; the nodules persisted and multiplied for some time, being aggravated by the least attempt at walking or even by allowing the feet to hang down. Rest and tonic treatment, with the application of tincture of iodine externally to the knots, at the end of six weeks, arrested the further development of these swellings, none of which threatened suppuration or indeed manifested any signs of active inflammation. An indolent tumefaction continued to mark the seat of each tumor which appeared. These phenomena, constituting what is described by Cruveilhier as "adhesive phlebitis," are not of common occurrence, and, we are led to think, not really of the nature of phlebitis at all, but due rather to a stagnation of the blood, or, in other words, that they are "spontaneous thrombosis," in a remote part of the circulation, from sheer inability on the part of the heart to propel the blood through its entire circuit. The condition of our patient's pulse, which was very weak and small, the feebleness of her heart's action, her anæmic condition and generally impaired health, as shown by the felon and abscess, together with the extent to which she was upon her feet, justify this theory of the symptoms, especially in presence of a case like that which has served us as a text, and in the light of the discussion which is there elaborately entered into. It is not difficult to imagine, in a subject like ours, that, had the symptoms been carried one degree further, much graver consequences would have been the result.

Occurring insidiously, in convalescents, or in delicate persons enjoying their usual degree of health, characterized by grave and sudden manifestations, the events liable to attend enfeebled action of the heart, whether from fatty or other degeneration, cannot be too frequently present in the mind of the physician or too earnestly brought to his notice.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

APRIL 11th.—*Cerebro-spinal Meningitis.*—Dr. ELLIS reported the following case.

On April 4th, a young man, 17 years of age, came home from a store in which he was employed, with a slight headache, but as he had been subject to this for several years it attracted no particular attention. In the evening, however, it increased, and was followed by vomiting during the night. He continued about the same through the following day, and sat up long enough to have his bed made; but that evening he made strange answers, and sat up in bed. A homœopathist was called, but before his arrival the patient was attacked with spasms, which continued till towards morning, when the patient died suddenly, thirty-six hours after the commencement of the disease. The symptoms were attributed to poisoning, and no medicine was given.

At the examination, made on April 6th, at 4, P.M., the arachnoid was found dry, and the convolutions somewhat flattened. There was no perceptible change in the cerebral substance, nor effusion into the lateral ventricle. The pia mater of the brain and spinal cord was opaque and infiltrated with thin pus. No apparent change in the tissue of the spinal cord. The bladder contained a large amount of urine. The spleen was somewhat enlarged.

Although the amount of pus was not so great as in some cases, the appearances were unequivocal. The short duration of the case may perhaps explain the limited development of the disease.

April 11th.—*Cerebro-spinal Meningitis.*—Dr. Coale reported the following case.

E. B., aged 14 weeks, a hearty infant, about Jan. 27th was observed to be restless and fretful, and to throw herself backwards frequently. Gradually her habitual position became one of flexion of the spine backwards, particularly in the region of the neck. She was brought to Boston and put under Dr. C.'s care Feb. 10th, just two weeks after the first signs of the attack. He found her lying on her side, the head bent backwards. The spine was also curved. The pulse was 100, regular. The bowels somewhat costive. There was no twitching of the limbs, no distortion of the face, or squinting. The pupils were contracted. This state of things continued without alteration, except an increase in the intensity of the symptoms. Death took place Feb. 19th, twenty-three days from the first appearance of the disease. At the time of death there was thorough opisthotonos, the trunk being bent backwards in the form of a semicircle. There was no discoloration or any spots on the skin. The treatment consisted in alteratives, and revulsives to the spine, but without effect.

April 11th.—*Typhoid Pneumonia.*—Dr. H. K. Oliver reported the case.

The patient was a gentleman, 40 years old, a native of Madeira, but a resident of St. Thomas, whence he came to Boston to buy goods. He had suffered from chills and fever, contracted at St. Thomas, and his health was somewhat affected thereby. The present attack began March 27th. When seen, April 1st, he was restless, with high fever, pulse strong, full and quick, skin hot and dry, tongue dry, but with only slight coat on centre and back, and pain in the thighs, which last was the chief source of complaint. No cough. Examination of the lungs, heart and abdomen revealed nothing. No pain or other symptoms pointing to any internal organ. On the 2d and 3d he had rather less fever, but was otherwise much the same. No sleep, and was excessively prostrated. The night before the 4th he was very restless, and delirious, throwing off the bed-clothes. He had a typhoid look about the mouth. Tongue as before. Bowels contracted rather than swollen. No spots of any kind on chest or abdomen. No signs found in chest. He was in continual motion, picking everything off the bed. The following night he was more quiet, though there was no return of consciousness. On the 5th the bowels were free, urine passed freely in bed; pupils natural; hiccough this day and the evening previous. He had a little cough, with expectoration, some of which was rusty and some milk-white, very dense, semi-membranous, without air-bubbles, and in long, thick masses. On account of his prostration, the chest was not examined. Pupils natural. On the 6th he was weaker, but quiet. Pupils contracted. Breathing labored. Tongue as before. He was totally unconscious, and had a sunken look. Pulse quicker and weaker. An examination of the chest revealed dulness on percussion and bronchial respiration in the upper part of the right side, in front and behind, with mucous and occasional peculiar flapping rales. The lower half was normal. Some of the urine was sopped up with a sponge from the bed, and, on examination, was found to be turbid, neutral, sp. gr. 1020, containing a considerable quantity of albumen, a normal amount of urea, and a trace of chlorides only. There was a heavy deposit of epithelium, but no casts were seen. The patient died at 2, P.M. There was no *post-mortem* examination. The treatment consisted in laxatives and diaphoretics in the beginning, and immediately afterwards quinine, beef tea, Dover's powder, carbonate of ammonia, brandy, &c. Dr. Warren saw the patient in consultation.

April 11th.—*Disease of the Heart and Aorta; Intestinal Hæmorrhage.*—Dr. Ellis showed the specimens, which came from a patient of Dr. Clark. He was a man about 52 years old, a German, and a grocer by trade. For more than a year he had suffered from palpitation; pain in the region of the heart, extending through to the back and down the arm; dyspnœa on mounting stairs, &c. Six months ago he began to have dropsy of the abdomen and legs, which increased until his death, although he was twice relieved by diuretics, so as to be able to go out—the first time by an infusion of pumpkin-seed, the second time by elaterium. Shortly before death he was attacked with intestinal hæmorrhage, which carried him off. The sounds of the heart were less distinct than usual, but there was no souffle.

At the examination, the aorta was found markedly dilated, but the most interesting change was found in the intestine. A limited extent of the large and small showed most unequivocal signs of hæmorrhage into the parietes, the tissues being perfectly crowded with blood. These points were undoubtedly the source of the hæmorrhage which terminated the patient's life.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, JUNE 9, 1864.

Annual Report of the City Registrar.—The report of the Births, Marriages and Deaths in Boston during 1863 has been carefully prepared by our excellent Registrar, Mr. Apollonio, and presents its usual store of interesting data. The same large decrease in the number of births which we noticed in the report of 1862, again at once claims our attention, and forcibly points to the presence of so many of our vigorous young men in the struggle for a free and happy country for their future offspring. The number of children born in 1863 was 5,255, a decrease of three from the number recorded the previous year, and 534 less than in 1861. Compared with the number of deaths, it will be seen that they exceed the latter only by 818, or, that were the population of Boston dependent alone upon its births for increase its growth would be slow indeed. In Wards 3, 5, 6, 7, 8 and 9, in fact, the percentage of the deaths was greater than that of the births. The table of nativity of parents "exhibits in a very clear light the materials of which the population of Boston is composed. It will be seen that there were only 1,207 children born whose parents were both native born. If half of those whose nativity is specified as 'unknown' be regarded as American, the number will then be 1,230—a decrease of 55 from the number recorded in 1862—thus showing, that only 23·40 per cent. of the children had parents that were born in the United States. The precise statement is, that no less than 76·59 per cent. of the children born in Boston during the year 1863 were of parents, one or both of whom were born outside of the United States. Of the whole number, those of unmixed Irish parentage make 45·19 per cent."

With regard to the colored population, a table is presented which shows that during the last nine years there have been as many colored marriages as colored children born, the whole number of each being 366. The number of deaths among them during the same period amounts to 611, nearly double the number of births. In 1863 the births were 62, the deaths 111. "With such results each year, it is not easy to avoid the conviction that there is little probability, in any contingency, of the Northern States being overrun by the colored race, bond or free. There is undoubtedly an instinctive repugnance on the part of the African to Northern latitudes; and the foregoing facts show very plainly the existence of physical causes, if nothing else, that bar their presence to any great extent, and which are more cogent than all opinions and theories."

The number of twin births during the year was 49: in 12 instances both children were males; in 11, both were females; and in 25, one was male and the other female.

Of the whole number of marriages, 2,322, only 280 of the grooms were born in Boston, and of them only 125 married Boston-born females. The whole number of native-born grooms was 1,183, and, if we deduct 196 who married foreign-born females, it appears that but in 42·50 per cent. of the marriages were both parties native-born. Of the brides 18 per cent. were born in Boston and 33 per cent. in Ireland.

The number of deaths during "the year 1863, was 4,699—an increase of 579 over the mortality of 1862. When it is remembered that there was a decrease in the number of the births, the increase of the mortality is a large one. Estimating the population the same as last year—182,000, which is undoubtedly near the correct number—the deaths will appear as in the ratio of 1 in 38·73, a result that is very seldom seen in the mortality record of Boston. The ratio in 1862 was 1 in 44·17. Compared with New York, Philadelphia, Baltimore and Providence (the only places concerning which the materials are at hand to institute a comparison), Boston the past year stands in an unfavorable light. The following table will show the ratio of deaths to the estimated population of each of the cities named :—

Cities.	Population.	Deaths.	Ratio.
Providence	55,000	1,215	1 in 45·26
Baltimore	250,000	5,546	1 in 45·07
Philadelphia	620,000	14,220	1 in 43·60
Boston	182,000	4,699	1 in 38·73
New York	900,000	24,196	1 in 37·19

"The deaths in New York are reported at 25,196. This number includes the stillbirths, which are not embraced in the reports of the other cities. As the number of these cases in New York is not known at the present time, they have been estimated at 1,000 (probably not far from the actual number), and deducted accordingly. In estimating the sanitary condition of New York by its mortality record, it should not be forgotten that that city is the great entrepot for emigrants from all parts of the world, large numbers of whom arrive there in every conceivable condition of physical degeneracy. Besides this a large number of sick and disabled soldiers contribute largely to swell the bill of mortality. When all these facts are taken into the account, New York compares favorably with Boston, and shows a better record than is often made of that city. Philadelphia also compares favorably with Boston. That city has a considerable number of hospitals for soldiers within its limits, which fact should be taken into the accounts in examining its mortuary record. In that light its ratio of deaths (1 in 40·43) is not excessive. Baltimore and Providence present nearly an identical record, which shows them to be far in advance of their three sister cities." The deaths in June were 272, in August 628. "The natural increase of the foreign element may be seen by the following comparative statement of the births and deaths during the past year :—

BIRTHS.		DEATHS.	
Foreign . .	76·59 per cent.	Foreign . .	68·07 per cent.
Native . . .	23·40 per cent.	Native . . .	31.92 per cent.

Of the 994 who died under one year of age, no less than 698, or 70·22 per cent. were of foreign birth. No less than 73, or 7·34 per cent. of the whole number, died on the day of their birth. Of these last, 51 were children of foreign parentage. Of the 1,030 who died between 1 and 5, 780, or 75·75 per cent., were of foreign parentage. And of the 207 who died between 5 and 10, 58·93 per cent. were of similar origin." The causes of death were as follows :—Accidents, 160 ; abscess, 18 ; apoplexy, 70 ; anæmia, 13 ; aneurism, 3 ; asthma, 12 ; bladder, disease of, 10 ; blood, disease of, 3 ; bowels, inflammation of, 51 ; do. disease of, 12 ; brain, inflammation of, 20 ; do. congestion of, 80 ; do. disease of, 68 ; bronchitis, 110 ; cancer, 52 ; carbuncle, 1 ; cholera, 1 ; cholera infantum, 342 ; cholera morbus, 27 ; colic, 4 ; consumption, 795 ; convulsions, 158 ; croup, 245 ; cyanosis, 12 ; debility, 46 ; diabetes, 4 ; diarrhœa, 107 ; diphtheria, 108 ; diseases, infantile, 76 ; do. puerperal, 30 ; do. unknown, 46 ; dropsy, 112 ; do. of brain, 182 ; dysentery, 90 ; dyspepsia, 5 ; epilepsy, 12 ; erysipelas, 16 ; exposure, 1; fever, bilious, 4; do. scarlet, 130; do. typhoid, 130; gangrene, 15; gastritis, 22; hæmorrhage, 16; heart, diseases of, 135; hernia, 6; hip, diseases of, 2; homicide, 9; inflammation of leg, 2; insanity, 4; intemperance, 45; intussusception, 4; jaundice, 10; kidneys, diseases of, 25; liver, diseases of, 32; lockjaw, 1; lungs, inflammation of, 261; do. congestion of, 88; do. diseases of, 15; lupus, 1; malformation, 5; marasmus, 138; measles, 7; necrosis, 3; neuralgia, 2; old age, 94; paralysis, 66; peritonitis, 24; pleurisy, 20; premature birth, 61; purpura, 6; pustule, malignant, 1; phlebitis, 1; prostate, diseases of, 1; pyæmia, 1; rheumatism, 15; scrofula, 16; scurvy, 1; smallpox, 11; sore throat, 36; spine, diseases of, 8; starvation, 1; stomach, diseases of, 3; suicide, 9; sunstroke, 10; syphilis, 10; tabes mesenterica, 3; teething, 20; thrush, 8; tumor, 16; ulcers, 8; uterus, diseases of, 3; whooping cough, 37; worms, 1; wounds (gunshot), 13. Total, males, 2,433; females, 2,266.

Cancer, it will be observed, destroyed 52 persons, 11 males and 41 females. The parts affected were as follows:—uterus, 10; breast, 9; stomach, 8; mouth, 2; not stated, 19; abdomen, back, ear, and groin, 1 each. The birthplaces of those dying from consumption are exhibited in the following table:—" Born in the United States, 315; in Ireland, 363; England and Wales, 18; British American Provinces, 52; Scotland, 10; Germany and Northern Europe, 5; other foreign places, 9; children of foreign parents, 23. It will be observed, that 59·12 per cent. of those that died from this disease were foreign born. Those born in Ireland make 45·66 per cent. of all the deaths from this cause, and 75·62 per cent. of those that were foreign born. Of the 1,119 persons who were born in Ireland, 32·44 per cent. died of consumption, or one in 3·08." The deaths by the same disease in each ward were:—Ward One, 93; Ward Two, 68; Ward Three, 83; Ward Four, 8; Ward Five, 51; Ward Six, 41; Ward Seven, 84; Ward Eight, 51; Ward Nine, 37; Ward Ten, 44; Ward Eleven, 82; Ward Twelve, 110. " *Gun-shot Wounds.*—There were 16 deaths thus reported. Five of them were of soldiers wounded in battle, and the remaining eleven those that were wounded in the riot of July last—8 men and 3 females. An impression has considerably prevailed, that a large number of lives were lost in that disturbance; this is a mistake, the number killed was as above stated." There were but 7 deaths from measles, against 78 in 1862. The number of stillbirths was 322.

DEDICATION OF THE MUSEUM OF THE SOCIETY OF NATURAL HISTORY.—The Boston Society of Natural History dedicated its new building, at the corner of Boylston and Berkeley Streets, Thursday, 3d inst.

At a quarter past 4 o'clock, the President of the Society, Prof. Jeffries Wyman, M.D., invited Rev. Dr. Hill, of Harvard University, to offer prayer.

Dr. Wyman then made a few preliminary remarks, expressive of the gratitude which the members of the Society felt for the high position now occupied by it, through the liberality of the Commonwealth and the munificent bounty of private individuals.

Prof. Wm. B. Rogers was introduced, giving a brief history of the efforts which had resulted in the beautiful edifice to which the audience were now welcomed, and paying a tribute to the patrons of the

Society deceased during the past year, Drs. Benj. Green, Geo. Hayward, and John Ware. After several unsuccessful applications, the Legislature, while the flames of civil war were lighting up the country, made the grant of land to the Society which it had asked for. For this gift to the advancement of science and the practical arts in this country, the Society was indebted to Governor Andrew, as much as to any other man.

Since the Society commenced its career, many of the great lights of science had sunk below the horizon, but other lights had arisen to take their places. It was an error to suppose that the removal of one or two men could stop the advancement of science. There is an intellectual law which controls the forces of man, and compels his progress.

Prof. Rogers spoke of the progress of the Society as affording a powerful stimulant to the student, and to those who desired to assist him. Science was the stairway by which we ascend towards the upper highway of thought, and acquire a knowledge of the laws of the Divinity.

Mayor Lincoln next addressed the assembly. He considered what had been done for the Society as advancing the honor and reputation of the city, and in the name of its citizens, bade the members God-speed in all their honorable efforts.

Lieut. Lutke, of the Russian Navy, aid-de-camp of the Grand Duke Constantine, was here introduced to the audience, and took a seat on the platform.

Rev. Dr. Waterston followed, expressing his conviction that this Society embraced one of the highest human interests.

The exercises having closed, the assembly were invited to examine the rooms and collections.

The building—the dedicatory exercises in which we have briefly described—has its principal front on Berkeley street, where it has a length of 105 feet. On Newbury and Boylston Streets its length is 95 feet. The plan of the building is a parallelogram. The design of the building has been carried out in classic style. An order of Corinthian pilasters, of 42 feet, rests on a superstructure of freestone rustic work, 16 feet in height, under which is a granite sub-base of 6 feet.

The central part of the Berkeley Street front is somewhat in advance of the main body of the building—the principal entrance being in this portion—which is approached by a massive flight of granite steps over fifty feet in width, having buttresses on either side, of the same material, intended for the reception of life-size representations of an elephant and rhinoceros, as guardians of the portals. It is intended to cut them from blocks of freestone, quarried for the purpose.

On each of the keystones of the arched windows on the Boylston and Newbury Street sides, and also on the front, are animals' heads cut in freestone, while over the front entrance is the seal of the Society, consisting of the head of Cuvier in bas-relief, which completes the series by placing in the most prominent place a head—and that a typical one—of man.

The projecting portion of the front supports a pediment which is surmounted by the Bird of Washington, while below on friezes are the names, Aristotle, Linnæus, Cuvier—names well becoming such a position.

The main doorway opens into the principal vestibule, decorated with Ionic pilasters, from which open the library, lecture hall, and several rooms for the exhibition of the collections of the Society. The grand oak staircase, leading to the main hall, is flanked on either side by life-size figures of bears. The main hall is on the second floor, and extends thence to the roof, being lighted principally from above. It is 40 by 80 feet, and is encircled by galleries connecting with the floors or balconies of the adjoining rooms, thus uniting and giving easy access to all parts of this immense museum. The hall is 50 feet high —a height being made up, first, of a doric arcade, and then, over this, an order of elegant Corinthian pilasters. From above the cornices of this order spring half arches, supporting the ceiling, which is panelled in a richly effective manner. The building was designed by Mr. Wm. G. Preston, of this city. The Museum will be open to the public on Wednesdays and Saturdays, from 10, A.M., to 5, P.M.—*Advertiser* and *Transcript.*

At the annual commencement of the Medical Department of the University of the Pacific, March 18, 1864, the degree of M.D. was conferred on seven candidates.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, June 4th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	42	39	81
Ave. mortality of corresponding weeks for ten years, 1853—1863,	38.8	33.0	71.8
Average corrected to increased population - - - -	00	00	79.05
Death of persons above 90 - - - - - - - - -	0	0	0

Books and Pamphlets Received.—The Principles and Practice of Obstetrics; illustrated with one hundred and fifty-nine Lithographic Figures from original Photographs, and with numerous Wood-cuts. By Hugh L. Hodge, M.D., Emeritus Professor of Obstetrics and Diseases of Women and Children in the University of Pennsylvania. 550 pages, 4to. Blanchard & Lea, Publishers.—Medical Diagnosis, with Special Reference to Practical Medicine, a Guide to the Knowledge and Discrimination of Diseases. By J. M. DaCosta, M.D., Lecturer on Clinical Medicine, and Physician to the Philadelphia Hospital, &c. Illustrated with Engravings on Wood. J. B. Lippincott & Co., Publishers.—The Pathology and Treatment of Venereal Diseases; including the Results of Recent Investigations upon the Subject. By Freeman J. Bumstead, M.D., Lecturer on Venereal Diseases at the College of Physicians and Surgeons, New York, &c. A new and revised Edition. Blanchard & Lea, Publishers.—Report of the Commissioner of Army and Navy Pensions for 1863.—An Address delivered before the Graduating Class of the Department of Medicine and Surgery, of the University of Michigan, March 30, 1864. By E. O. Haven, D.D., LL.D., President of the University.—Annual Announcement of the Medical School of Maine, Course of 1865.—Ninth Annual Report of the Births, Marriages and Deaths in the City of Providence, R. I. for the year 1863. By Edwin M. Snow, M.D., Superintendent of Health and City Registrar’

Married,—In this city, Dr. Buckminster Brown, of Boston, to Sarah Alvord Newcomb’ of Greenfield.

Died,—At Fort Warren, Boston Harbor, June 5th, Dr. Gideon F. Barstow, Contract Surgeon U.S.A., suddenly, supposed of disease of the heart.—In this city, May 20th, Dr. Ira Warren, 58 years 4 months.

Deaths in Boston for the week ending Saturday noon, June 4th, 81. Males, 42—Females, 39.—Accident, 2—apoplexy, 1—congestion of the brain, 5—disease of the brain, 2—bronchitis, 1—cancer, 2—consumption, 13—convulsions, 4—croup, 1—diphtheria, 1—dropsy, 3—dropsy of the brain, 3—drowned, 1—dysentery, 2—scarlet fever, 1—typhoid fever, 1—gangrene, 1—disease of the heart, 2—insanity, 1—intemperance, 1—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 4—marasmus, 2—measles, 4—paralysis, 1—premature birth, 2—puerperal disease, 1—smallpox, 3—syphilis, 1—unknown, 9.

Under 5 years of age, 34—between 5 and 20 years, 11—between 20 and 40 years, 16—between 40 and 60 years, 13—above 60 years, 7. Born in the United States, 59—Ireland, 14—other places, 8.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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THE CAUSES OF EXUDATION IN INFLAMMATION.

By Mr. Edward Greely Loring, Jr. An Essay to which one of the Prizes of the Boylston Medical Society was awarded.*

[Communicated for the Boston Medical and Surgical Journal.]

The object of the following Essay is to prove how far in an inflammatory process the exudation is the result of the inflammation, not a part of it, and how far it is dependent on the saline ingredients of the economy.

The following statements were taken from one of Dr. White's lectures at the Hospital on the clinical examination of the urine. "The chloride of sodium has a great effect in rendering substances in the blood soluble. Blood contains in every 1000 parts 4·2 parts of chloride of sodium, serum 4·6. Effusion in pleurisy, 7·5. Ten and one half grammes pass out of the system by the kidneys in twenty-four hours. In acute diseases, where there is effusion into serous cavities, joints or tissues, the chlorides are diminished in the urine. In pneumonia the chlorides are very much and very rapidly diminished—sometimes totally in twenty-four hours. When reabsorption takes place, the chlorides reappear in the urine. In inflammation of the liver, in peritonitis, and in cholera, there is often a total absence of the chlorides in the urine. If the chlorides reappear, convalescence takes place. In typhoid fever the chlorides are diminished, though not so much, nor so rapidly, as in the above-mentioned diseases. In intermittent fever they are diminished on the fever day. The urine only contains the surplus of what is not wanted by the blood. The kidneys refuse to eliminate the chlorides where there is inflammation with effusion. If, when the kidneys will not eliminate it, salt be passed in quantities into the system, it will then be eliminated through the intestinal canal, but not until the blood is saturated. When the chlorides are diminished in the urine, the other saline ingredients are also diminished, though in a less degree. In rheumatism the chlorides in the urine are but slightly diminished, though when pericarditis is associated with it, they are diminished to a considerable extent."

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* A prize awarded to under-graduates of Harvard Medical School.

It will be seen by the above statements, that, in all diseases characterized by an exudation, the chlorides (the chief of which by far is the chloride of sodium) are diminished in the urine, and, that the more inflammatory the disease is, the greater is the decrease, and that as they decrease in the urine, so they increase in the exudation, since the serum of the blood contains but 4·6 parts in 1000, while the effusion resulting from an inflammatory disease, where the chlorides are diminished in the urine, contains 7·5 parts. Now as the diminution of the chlorides in the urine is accompanied by their increase in the exudation, and, as exudation is often the result of inflammation, the question arises, what relation their disappearance in one place bears to their appearance in another, and to what extent, if any, does their diminution on the one hand, and their increase on the other, affect the process of inflammation, or at least that part of it which relates to effusion?

Without stopping to speculate on the vexed question of what inflammation is, or what its causes are, let us look at some of its effects after the process is once set in motion—the two most prominent of which effects are determination with increased flow of blood towards a certain spot, followed by a stagnation of blood and an exudation at that spot.

The exudation is the result of endosmosis and exosmosis. Certain laws govern this process, among which are the following:—

1. A non-saline or watery fluid will pass through a membrane towards a saline one, faster than the saline one will pass to it, and the rapidity with which the watery fluid will pass to the saline is in proportion to their different consistency.

2. The quicker the current of a liquid on one side of a membrane, the greater the attraction, and, consequently, the greater the endosmosis into that liquid.

3. The activity of endosmosis and exosmosis is in direct proportion to the extent of surface over which the two liquids come in contact with the intervening membrane.

4. Pressure exerted on fluids favors their passage through a membrane.

5. Affinity and the desire which a fluid has to maintain its integrity favors the process of endosmosis.

In inflammation there is a great increase in the metamorphosis of tissue and an increased flow of blood to the part for the purpose of repairing in some way the waste, occasioned by the process which we call inflammation. Now the greater the inflammation, the more the waste, and the greater the determination of blood to repair that waste. The process by which tissues are repaired is the same as that by which they are nourished, in disease as in health, viz., that of transudation, known as the process of endosmosis and exosmosis. It is sometimes thought that the exudation which characterizes inflammation is due to the fact that the blood, in passing through the inflamed portion, gives up its watery parts, and then in its altered condition passes on, while its place is supplied by fresh blood, which, in its turn, undergoes the same process. Now if this were true, the more rapid the current of the blood the greater the exudation, which is diametrically opposed to the law proved by Matteuci, that the force of transudation was *into* the current, not *from* it, and that this force was in proportion to its rapidity. Again, if this were the case, the greatest amount of exudation would be at the highest point of the inflammation. But every practising physician knows that the force of the inflammation and the rapidity of the current begin to subside as the exudation appears. This is not only true chemically, but is also in accordance with physical laws. Henle says: "As a physical consequence of the dilatation of the vessels, there takes place a retarded flow of the blood. This, together with the relaxation and dilatation of the vessels, favors the exudation of the serum, the consequence of which is that the plasma of the blood becomes inspissated by a preponderance of the protein matters over the salts." This is quoted here simply to prove that the flow *is* retarded, not to answer the question what occasions the "stasis," which, according to Mr. C. Hanfield Jones, "is the great unsolved problem of inflammation." But more of this hereafter.

Taking into consideration all the above facts and laws, rational and physical, let us boldly put forth the theory that the exudation is the result of inflammation, not a part of it; and that it is dependent on the saline ingredients of the economy, "of which the chloride of sodium is rather more abundant in the blood than all the rest together," and then let us see how far our premises will support our conclusions.

Suppose active inflammation to exist, and with it, as a matter of course, an increase in the metamorphosis of the tissue, and that with this we also have an increased flow of blood towards the spot, caused, it is fair to suppose, by the thirst which the tissue has to repair the waste occasioned by the morbid action. This, it is true, is theoretical, but as long as the cause or causes of inflammation are enveloped in mystery, we have a right to indulge in a theory which is based on common sense, till a fact demonstrates it to be untrue. Is it not fair to suppose that the sensation which we call hunger, and that which we call thirst, are but the expression of the desire which the tissues have for that wherewith to replace what has been expended? Cannot inflammation be supposed to bear the same relation to the natural process of nutrition that a morbid craving does to a natural appetite? In support of this theory, Mr. Simon, in his "Lectures on Pathology," remarks, "altogether, we may take it as an established certainty, that the first change which occurs in an inflamed or *overgrowing* part, and which leads to its becoming loaded with blood, is not a reflex change operated through the nerves, but is a direct change by the living molecular structure of the part on the blood which traverses it, or on the vessels which convey the blood." It is to be remembered that the increased and more rapid flow of the blood through the vessels are things which, by the aid of the microscope, we can see—but the molecular movements of nutrition and secretion, which we believe to influence and modify the circulation through a part, we cannot see. They are, however, as real, as potent; but they are, except in their results, invisible.

Suppose, then, this active metamorphosis to be going on, and a very much larger amount of nutritive material to be consumed than that required in an ordinary state of health, might it not be possible, nay probable, of a plasma composed of watery, organic and inorganic compounds, that the liquid and easily decomposible organic matter should be more rapidly consumed than the inorganic or saline material, and in this manner might there not result an accumulation of the latter in the surrounding tissues and membranes? Or, even stronger, might not the tissues, influenced by the morbid action, have a direct desire for particular ingredients of the blood over the others, in which case we should expect to find a diminished amount of this particular ingredient in the blood, when affected by the inflammatory action, than when in a state of health? Now, according to Jones and Sieveking, "in violent inflammation the salts are much diminished," and according to Henle, through exudation of the watery and saline parts, the plasma of the blood becomes inspissated by a preponderance of protein matter over the salts.

In the blood we have seen that the chloride of sodium is more abundant than all the other saline ingredients put together, and we should naturally suppose, even had it not been proved, that its abstraction from the blood would be followed by grave results.

In case of inflammation with exudation, the "kidneys do not eliminate the chlorides." What becomes, then, of all the chlorides introduced into the system, especially the chloride of sodium, which is largely taken into the economy with whatever we eat, drink or breathe? As the kidneys do not eliminate it, we should expect to find the blood charged with it; but in inflammation the blood contains less than in health, when the kidneys are actively drawing it from the blood. If the kidneys do not eliminate, and the blood contains less than its normal amount, what becomes of it? The excess must exist somewhere, and it does exist in the exudation, where it is found in the proportion of 7·5 to 4·6 parts in 1000 of the healthy serum of the blood. But it is proved that when the kidneys refuse to eliminate the chlorides, they are eliminated by the intestinal canal; but this only happens, according to Dr. White, when the blood is saturated with them, and as in inflammation the blood is not only not saturated, but even contains less than its usual amount, this elimination cannot take place.

We have supposed above that an inflammation existed, that there was an increased flow of blood towards a particular spot, that there was an increased metamorphosis of tissue, that there was an accumulation of the saline ingredients in the neighboring tissue. To support this last statement, which it is our object to prove, we have the following facts:—

1. Absence of the chlorides from the urine.
2. Decrease of them in the blood.
3. Increase of them in the exudation.

Let us now see how this increase in the exudation takes place, and to what it is owing.

To do this we must recapitulate, and imagine, as before, that the inflammatory process has been set in motion. The blood now rushes towards the inflamed part, forcibly drawn thither by the desire which the tissues have to supply the waste by new material. Arrived at the spot, it delivers to the tissues what they need. But the desire being greater than the supply can satisfy, fresh blood is attracted to the spot, and, this process continuing, a current is established, and the greater the desire, or, in other words, the greater the inflammation, the quicker the current. But it has been stated that the quicker the current is, the less the exosmosis, and, consequently, the less the material passed to the tissues. This would be true were it not for the fact, that it is the affinity which the tissues on one side of the membrane have for what the blood contains on the other that causes the current; and it is easy to see that attraction towards a particular spot might cause a current towards that spot, with transudation *outward at that spot*, while in other places where the morbid action did not exist, the attraction would be *into* the current and in proportion to its rapidity. So it is with inflammation. What it furnishes to one place it abstracts from another, and so drains the system.

Therefore, suppose the circulation, and at the same time the transudation of the plasma to be rapid—since we have seen that these two conditions are not necessarily incompatible—a great amount of new material is then rapidly delivered to the tissues and is as rapidly consumed, and the consumption of the protein compounds being greater than that of the saline from their very nature, it follows that the neighboring tissues will become incorporated with the salts, and this consumption of the organic and accumulation of the inorganic will go on as long as the morbid action lasts. But when this desire on the part of the tissues ceases, a new condition of affairs takes place. The rapidity of the current, which had been occasioned by the "attraction," diminishes as its cause becomes less, and the current would again regain its natural velocity, were it not that a new set of phenomena, purely physical, now occur. The condition is this:—Suppose the walls of the capillaries to represent, as they do, a membrane through which the process of endosmosis and exosmosis takes place. On one side of the membrane is the tissue incorporated with the salts, or a saline liquid, while on the other is the blood, or a watery liquid, and more so than usual, for, as Lehmann states, "in the beginning of most diseases, especially the acute ones, the blood is found more watery than usual." Now what takes place? In obedience to the law, the watery fluid passes to the saline, and the amount and velocity with which the former will pass to the latter are in proportion to the amount and density of the latter. What is the result? Exudation or infiltration on the one side, while the blood on the other, deprived of its watery and saline ingredients—the latter of which, according to Dalton, play so important a part in rendering the albumen soluble and maintaining the integrity of the globules—becomes thick and inspissated, and, the protein material predominating over the watery and saline, the fluid, from its very nature, becomes unfit for circulation, and stasis occurs; and the inflammatory action continuing, disintegration of the vessels and tissues follows. Cannot this *questio vexata*, this matter of stasis, which so many anatomists have tried so hard to prove was the result of some invisible, vital force, be explained as the simple result of the above physical laws and their actions?

In speaking of this matter of stasis, Mr. Wharton Jones says:—"The stagnation commences in the capillaries, and extends from them to the veins on the one hand and the arteries on the other;" and Mr. Hanfield Jones, writing on the same subject, says:—"We have seen the blood stagnant in the capillaries, while it was moving on steadily through an adjacent artery and vein. This points to the capillaries as the part where the arrest commences," and this is precisely where the exosmosis takes place.

We now have, as the result of the inflammatory action, a stoppage of the circulation at the spot and a thickened and altered blood, which the *vis a tergo* is unable to force through the vessels, on one side of the walls of the capillaries, the effusion on the other. With this we also have decrease of saline compounds in the blood—especially the chloride of sodium—and decrease and even absence of the chlorides in the urine. If the inflammatory action continues, the tissues will undergo further changes until degeneration of them and the surrounding parts ensues. But if the morbid process ceases, a different result follows. Strictly speaking, there can be but one end to inflammation—that which is called resolution, in which the diseased action ceases to advance, and then recedes by the same steps by which it arrived at the condition of stasis. The inflammatory process ceasing, the "craving" which the tissues had ceases also, and the attraction no longer existing, the desire on the part of the blood to regain its former consistency and to maintain its integrity causes the transudation to be into the capillaries, not from them, in conformity with, if not in obedience to the physical law that the lighter liquid passes to the heavier in proportion to the density of the latter, the affinity between the two liquids being in proportion to their difference. The force of the *vis a tergo* is now sufficient to propel the fluid through the capillaries, and circulation is re-established. These phenomena correspond to the subsidence of the general symptoms.

The redness and the pain become less, the temperature is lowered, and the swelling (caused, according to Rokitansky, not by the congestion of the vessels, but by the effusion) subsides. This is resolution, or reabsorption. But it is not water alone that the blood stands in need of; it wants also the salts which have been exhausted from it, to render its protein compounds soluble and to maintain the integrity of its globules. So as reabsorption takes place, not only does the blood regain its normal amount of saline ingredients, but these also *reappear in the urine*, in which they were either diminished or totally absent.

Now as we have seen, while the inflammatory action is at its height, there is a minimum of the saline ingredients of the blood, a minimum or absence of them in the urine, and a maximum in the effusion; and as the effusion disappears so do they reappear both in the blood and in the urine, it is fair to conclude, then, that the increased quantity in the effusion was obtained at the expense of that which previously existed in the blood and of that which would have been eliminated by the kidneys. This would follow rationally, had it not been *proved* by actual analysis that the effusion did contain more saline material than the serum of the blood from which the effusion is elaborated.

Taking all the above facts into consideration, we may at least have some reason for thinking that the exudation is not a part of the inflammatory process, but is rather the result of the morbid action depending on or occasioned by the saline ingredients of the blood, of which the chlorides play by far the most important part, and that the effusion is rather a physical than a vital process. Let us see, now, if this view will conform with the phenomena presented by actual disease.

We will begin with pleurisy. We select this affection because in other diseases the chemical examination of inflammatory products is very difficult, partly in consequence of the impossibility of procuring more than very small quantities, partly because they can be obtained so seldom in a pure and unmixed state. But the exudation of pleurisy, from the nature of its receptacle, approaches nearer to this condition of purity than would other exudations and infiltrations, where they are mingled with a variety of tissues by the changes in which they themselves would be apt to suffer change.

Case I.—A man is attacked with pleurisy, and goes through all the regular phases of the disease. During the attack the chlorides are diminished or disappear in the urine. Exudation takes place, accompanied with an amelioration in the inflammatory symptoms.

The exudation is absorbed, and the chlorides reappear in the urine. Or, again, a man is attacked with pleurisy. The chlorides have disappeared from the urine. The man is tapped, and the effusion is found to contain in every 1000 parts 7·5 parts of chloride of sodium alone, while the blood contains normally only 4·2 parts: the whole amount of fixed salts being, according to Simon, in fluid obtained by paracentesis thoracis, 9·5 parts in 1000.

Case II.—Pneumonia. A man has an undoubted attack of pneumonia. The chlorides disappear entirely from the urine. Convalescence, with reabsorption, takes place, and the chlorides reappear in the urine—or the man dies in the height of the disease. The chlorides were absent in the urine. At the autopsy, a general infiltration is found to have taken place into the tissue of the lung, and the salts in the blood, as in all violent inflammation, are found to be much diminished, while they are found in greater quantity in the sputa.

"In malignant cholera the excessive drain tells most on the fluid part of the blood, and hence that remaining in the vessels is thick and tar-like; hence, also, the extraordinary though temporary effect of injecting *saline solutions*, which return to the blood the material effused from it and revive all the functions that were well nigh extinct. Doubtless if the intestinal discharges could be arrested the effects would be permanent, but as it is, their effect is soon exhausted." If we, with the Germans, consider cholera to be an inflammatory disease, and in this the same metamorphosis of tissue to have taken place, the same consumption of the organic and deposit of the saline materials to have occurred as in other inflammations, we can easily understand why the exudation, occurring as it does, over such an extent of membrane, should be so excessive, and the drain on the system so great, the blood so thick and tar-like.

Many more instances of the same effect, taking place in other than the above-mentioned diseases, might be brought forward here, such as in peritonitis, in meningitis, and in pericarditis, &c. But the limits of this article will not permit their insertion here.

But it may be said that rheumatism is an inflammatory disease, and that the same general phenomena must characterize this as other inflammatory processes; that there would be the same metamorphoses of tissue, the same preponderance of saline material, and if there were, there would also be, according to the physical law laid down, an exudation, and if this exudation did take place there should be a decrease of the chlorides in the urine. Now the exudation in rheumatism is comparatively scanty, and although there is some diminution in the salts in the urine, they are not nearly so much diminished in this as in other inflammatory diseases. This seems at first sight to be at variance with the views brought forward, but in reality is confirmatory of them, as we shall see if we consider that rheumatism generally attacks the joints, where the tissues, instead of being spongy or yielding, are compact and firmly bound down by tendons and fasciæ, which by their pressure on the vessels greatly impede transudation. And we can easily understand that the inflammation, although confined in extent, might be exceedingly violent and painful, and the consumption of material at that spot great, while the supply of new material, from the pressure exerted on the vessels which should provide that part, would be limited; and the accumulation of the chlorides at this spot and their decrease in the urine, not so strongly marked here as they would be where the inflamed part was a serous sac, where the morbid action could have full sway, where the vessels ramify over a large extent of membrane, and where there is nothing to impede but everything to favor exosmosis—as, for example, in pleurisy, peritonitis, meningitis, &c., or in the spongy tissue of the lungs, or the yielding ones of the brain. But when we have pericarditis associated with and dependent on rheumatism, we have the inflammatory process extending over a comparatively large surface. In this case, where the process of waste and repair is not interfered with, the consumption of the organic matter untrammeled, the residue of the inorganic unaffected, and the exudation unimpeded by pressure on the ramifying vessels, we not only have the effusion, but also the accompanying diminution of the salts in the urine—as in the case of Albert Ford, now at the Mass. Gen. Hospital, in whose urine only the slightest trace of the chlorides was detected.

In the foregoing remarks perhaps sufficient distinction has not been drawn between exudation and simple transudation. Reference has been made solely to the exudation which is the result of the inflammatory process, not at all to that of simple transudation dependent on a weakened and relaxed state of the capillaries—for in the latter process the chlorides are not diminished in the urine, while according to Lehmann they are even increased in the blood. No allusion has been made to the exudation resulting from the inflammatory process known by the indefinite and erroneous name of "lymph," as this is considered by the writer to be a healthy, not a morbid action—a process of repair for the purpose of replacing the tissue destroyed, since under favorable circumstances this is capable of organization, though this, like the other tissues, should the inflammatory action continue, can be consumed or destroyed, and then the same result will follow here as that mentioned as occurring in the preceding remarks.

How far exudation is the result of inflammation and not a part of it; and how far it is dependent on the saline ingredients in the economy, we have by the above arguments and examples tried to prove. It would be useless to cite any more, for if there is any truth in the above remarks these will be enough to prove it; if there is no truth in them, then the fewer examples to prove an absurdity the better.

MENINGITIS.

By Peter D. Walsh, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—Having read with interest many articles entitled "Cerebro-Spinal Meningitis" in the Boston and Philadelphia Medical and Surgical Journals, I propose to submit the following case with its complications, taken from rough notes from day to day.

James Bresnan, aged two and a half years, always delicate, though well cared for, has had from time to time slight inflammation of the cervical glands, but seemed well at the time of his fatal attack.

On the 28th of March he fell from his bed, a distance of three feet, to the floor, on his face and forehead, leaving a slight scratch on his nose, but did not complain at the time.

On 29th, at 5, P.M., he fell into "a stupid fit," as the parents described it. I saw him at 7, P.M. He was lying on the bed; refused to answer questions; there was great stupor, and indifference to all surrounding objects; made no complaints in any way; skin dry and hot, face flushed, head and scalp of burning temperature; eyes open and staring; pupils fixed; breathing laborious; temporal arteries and jugular veins throbbing; pulse 140, strong.

Treatment.—Stood him in a warm bath; sponged him over briskly for fifteen minutes; cold applied to the head at the same time. Calomel, gr. viii., in two powders, to be given at intervals of four hours. Spt. nit. dulcis, twenty drops; fluid ext. digitalis, four drops; syr. aurantii, one drachm; and one-eighth of a grain of antimony every three hours until morning. Cold sponging to the head continued.

30th.—Saw him at 9, A.M. Has had two dejections; urinated freely; skin bathed with sweat; flush of face diminished; head and scalp cool; pupils more contracted and less staring; lying on the bed quite motionless; stupor continued, declined to answer questions; tongue coated and white; pulse 125, and small; refused to take drinks. From his great prostration I ordered the following: —Aq. camphoræ, minth. pip., syr. aromat., rhei., aa half drachm; spts. ammoniæ aromat., ten drops; quinine, a sixth of a grain; every two hours. Gum Arabic for drink; continue the cold to the head. Saw him at 5, P.M. Took his medicine; had great jactitation; head and scalp dry and burning; face flushed and glossy; body warm; eyes fixed and staring; pupils contracted; lower limbs flexed; tongue white and coated; temporal arteries and jugular veins throbbing; pulse 135, and bounding. Ordered a leech to each temple, to let them bleed freely; a large teaspoonful of castor oil; mustard poultice to nape of neck; to continue the cold sponging to head.

31st, 9, A.M.—Had a comfortable night; had one dejection; urinated freely; took his drinks; answered questions, and was cheerful. Skin moist; head cool; flush of face diminished; tongue moist; pulse 100, and regular. Ordered hyd. cum. creta, gr. five, half in the forenoon and half at night; to continue sponging to head. Milk and water as drink.

At 7, P.M., was sent for; looked haggard and distressed, writhing with pain; passed no water for the six preceding hours. To be seated for fifteen minutes in a warm bath; fluid extract senna, one drachm, and the following diuretic—spt. nit. dulcis, twenty drops; fluid ext. hyoscyamus, ten drops; fluid ext. digitalis, three drops; syr. aurantii, one drachm; carb. sodæ, grs. six; every two hours in sweetened water.

April 1st, 9, A.M.—Took his medicine; had one dejection; made no urine; strained and wanted to sit continually on the chamber; groaning with pain; great nervous agitation; twitching of head and hands; thumbs clinched; lower extremities flexed; had no sleep; grasping at imaginary objects, and picking the bed-clothes; eyes dull and heavy; head cool; skin moist; considerable stiffness of neck, and drawn to the left side; whined when touched about the neck; pulse 100. Examined the chamber: it contained two tablespoonsful of urine filled with white lithates.

Ordered him to sit in a warm bath for ten minutes; flannels wrung out of warm rum well diluted, and water to neck. To continue his diuretic. At 9, P.M., father of the child came to me and said he was totally out of his mind, wanting to jump out of bed. Ordered three grains of Dover's powder.

2d, A.M.—Had a good night, and rested well; urine more free, with less pain, but filled with lithates; head cool; skin moist; complained of soreness of neck; pulse 98, and regular. Dover's powder, in two-and-a-half-grain doses, morning, noon and night. Diuretic to be continued. Flax-seed tea as drink. Warm fomentations to kidneys, bowels and neck. At 7, P.M., very comfortable. Urine abundant; lithates, or red gravel, appeared in small quantities.

3d, 9, A.M.—Made water freely, gravel almost disappeared; great nervous agitation—head and hands twitching, thumbs half clenched, with opisthotonos; lower limbs flexible; refused to take drinks, from difficulty in swallowing; pulse 130; tongue more clean and red. Ordered mercurial ointment, one drachm, to be rubbed in, morning and evening. Cotton flannels, saturated with warm hog's lard, over ointment.

I considered at this stage that the case was hopeless. My opinion being asked, I gave it freely, stating there were very little hopes of his recovery.

4th.—I called, but was informed that he was in care of another physician. The case being an interesting one, I was, however, resolved not to lose sight of it; hence I made an occasional visit, without invitation or interference.

The attending physician at this time called it "*the new disease of the South.*" I suppose he meant cerebro-spinal meningitis. He continued his visits for some time, making hopeful promises, but he, too, was doomed to disappointment.

A seventh and last was called in, who made several visits, with no better success. I regret I cannot give the treatment of these gentlemen, as it would make the case more interesting.

The little patient continued to sink gradually, appearing to suffer but little. He took his drinks very sparingly, and on the forty-fourth day of his illness he lost his speech, had involuntary discharges, and opisthotonos still continued. On the fifty-fourth day congestion of the lungs set in, with partial loss of sight, and on the fifty-eighth day death closed the scene.

I considered this, Messrs. Editors, an aggravated case of genuine *meningitis*, as described by Copland, West, J. B. S. Jackson, and many others, and treated it accordingly. As the child was not exposed to the mephitic exhalations in the malarious regions of the South—so graphically described some time past in this JOURNAL, by one of our army surgeons there—I cannot see how or why it should be called "the new disease of the South." What abnormal features did it present to justify the new-fangled nomenclature, and in what measure, symptoms, or signs, did it differ from the old type, and so don the garb of that remote, occult and *mysterious stranger?* It would confer a favor on your correspondent, and benefit, in his opinion, the profession, were his learned and respected *confrere*, above alluded to, to condescend thus publicly to give us the pathognomonic symptoms, or signs, whereby he was—that we may be—able to distinguish and discriminate between *the old Northern* and *the new Southern disease*, and so draw a line of demarcation which would clearly and unerringly point the way to a correct and accurate diagnosis—with the appropriate, *new* treatment of the nondescript *new* disease.

THE TOOT-POISON OF NEW ZEALAND.

By W. LAUDER LINDSAY, M.D. AND F.R.S. EDIN., F.L.S., &c.

DURING a tour through the New Zealand provinces in 1861–62, the writer was struck with the abundant evidences which everywhere presented themselves of the ravages produced among the flocks and herds of the settlers by the *Toot-plant*, one of the most common indigenous shrubs of those islands. In many cases of losses by individual settlers brought under his notice, the amount from this source alone had been from twenty-five to seventy-five per cent. In Otago particularly were such losses felt during the height of the gold mania, from July to December, 1861; the traffic between Dunedin and Tuapeka gold-fields requiring the service of large numbers of bullocks, a great proportion were lost by Toot-poisoning. In colonies which as yet have depended for their prosperity almost solely on pastoral enterprise, such losses form a material barrier to prosperity; and the concurrent testimony of the colonists in every part of New Zealand proves the great desirability of determining the nature of the Toot-poison, the laws of its action on man and the lower animals, and its appropriate antidotes or modes of treatment. With a view to assist in the attainment of these aims, the writer has made notes, on the spot, of a large number of instances of the poisonous or fatal action of the plant on man—adults as well as children—and the lower animals, and had brought specimens home for chemical examination. The chief results of his investigations may be thus stated:—

1. The Toot-poison belongs to the class of *Narcotic-irritants.*

a. Its action on man includes the following symptoms:—coma, with or without delirium; sometimes great muscular excitement or convulsions, the details differing in different individuals; during convalescence, loss of memory, with or without vertigo.

b. In cattle and sheep, they include vertigo, stupor, delirium and convulsions; curious staggerings and gyrations; frantic kicking and racing or coursing; tremors.

2. The poisonous portion of the plant,

a. To man, is generally the *seed*, which is contained in a beautiful, dark purple, luscious berry, resembling the blackberry, which clusters closely in rich pendant racemes, and which is most tempting to children; occasionally the young *shoots* of the plant, as it grows up in spring.

b. To cattle and sheep, in almost all cases, is the young *shoot*, which is tender, and succulent, resembling in appearance and taste the similar state of asparagus.

3. The following *peculiarities* exist in regard to the action of the Toot-poison:—

a. A predisposition must exist, such predisposition being produced in cattle and sheep by some of the following conditions or circumstances:—The animal is *not habituated* to the use of the plant; it suddenly makes a large meal thereof after long fasting, or long feeding on drier and less palatable materials, or after exhaustion by hard labor, or hot, dry weather. From some such cause the digestive system is deranged, and is susceptible of more serious disorder from the ingestion of food to which the animal is, at the time, unaccustomed. Hence Toot-poisoning frequently occurs in animals which have just been landed from a long and fatiguing sea-voyage, during which they have been underfed or starved, to whom the young Toot-shoots present the most juicy, fresh, pleasant diet.

b. On the other hand, the same kind of animals, *habituated* to the use of the Toot-plant, not only do not suffer at all, but for them it is regarded as quite equal in value to, and as safe as, clover as a pasture food. It is an equal favorite with cattle and sheep, whether they have been habituated or not.

c. The predisposition in man is probably produced by analogous conditions depressing the tone of his nervous and digestive systems, or directly deranging them. *Children* are affected out of all proportion to *adults.*

d. Adults who have suffered from the poisonous action of Toot under certain circumstances have been exempt from such action under certain others—the same parts of the plant having been used, and apparently in the same way, in both sets of instances. Moreover, the Toot-berries enjoy, both among the Maoris and colonists, an enviable notoriety on account of the harmless and agreeable wine and jellies they are capable of producing, the former whereof espepecially has long been greatly prized. The *seeds,* however, in these cases probably do not enter into the composition of the said wine and jellies.

4. The current *remedies* for Toot-poisoning among the settlers are, in regard to—

a. Cattle and sheep—mainly bleeding, by slashing the ears and tail. Belladonna has been variously tried, and favorably reported on; by others, stimulants are regarded as specifics (carbonate of ammonia, brandy, or a mixture of gin and turpentine, locally known as "Drench"). Whatever be the nature of the remedy, there is no difference of opinion as to the necessity for the promptest treatment, since, at a certain stage of the action of the poison, *all* remedies appear equally inefficacious.

b. In man, the nature of the remedy is still more varied, though emetics and stimulants seem the most rational of those usually had recourse to.

5. The *Toot-* or *Tutu*-plant is the *Coriaria ruscifolia,* L. (the *C. sarmentosa,* Forst). The plant is variously designated by Maoris and settlers in different parts of the New Zealand islands; and this of itself indicates how familiar it is, and how abundantly and widely distributed. The genus *Coriaria* is a small one, and, if not belonging to a sub-division of the Natural Order *Ochnaceæ,* probably represents a separate Order closely allied thereto and to the *Rutaceæ.* The most distinguished botanists, however, are at issue as to its precise place and alliances in the vegetable system. They are in similar dubiety as to the *species* of the genus, and the *varieties* of the species *C. ruscifolia,* L. In New Zealand there appears to be at least three *Coriarias,* which some botanists regard as mere varieties of *C. ruscifolia,* L., and others consider separate species. The writer had made, in July, 1862, an examination of all the species of the genus *Coriaria* contained in the Hookerian and Benthamian Collections at Kew, the result whereof was a strong conviction of the necessity for a critical revision of the whole genus, throughout all its species, wherever distributed. The writer considers the specific

names of the Toot-plant (both *ruscifolia* and *sarmentosa)* objectionable, as not truly applicable or descriptive; and proposes the specific term *C. tutu,* the Maori name of the plant, as more convenient to indicate the *type* of the species, leaving such terms as *ruscifolia, thymifolia* and *sarmentosa.* to represent varieties or other species, as a subsequent critical examination of the genus may render necessary or desirable.

In contrast to, and in connection with the toxic action of *C. ruscifolia,* the writer may remark on the better-known poisonous properties of *C. myrtifolia,* familiar as an adulterant of senna, and on those of other species of the genus *Coriaria.* He announces his belief that the whole genus *Coriaria* must be considered endowed with poisonous properties, probably of the narcotico-irritant class, and that, as such (especially in reference to the extent and importance of the economic losses caused by such species as Toot), it is eminently deserving of thorough scientific investigation.

Under this head he may point out the fact that—

a. While certain animals seem to be themselves exempt from, or insusceptible to, the action of the poison, they may, by feeding upon certain species, or certain parts of some species of *Coriaria,* and thereby assimilating or secreting the contained poison in their tissues, communicate poisonous effects, or become poisons, to man or the lower animals, to which they (the animals first mentioned) have become articles of diet. He would cite a recent instance in connection with *C. myrtifolia,* in which several persons near Toulouse were poisoned by a dish of snails which had been fattened on its leaves and shoots.

b. That Royle, in reference to the fruit of *C. napelensis,* Peschier, of Geneva, in regard to *C. myrtifolia,* and other authorities in regard to other species of *Coriaria,* have published instances of their *harmless* or even *beneficial* effects, under certain circumstances, on man or the lower animals. Such conflicting statements would appear to indicate that there are peculiarities in the action of the poisonous principles of all the *Coriarias,* or discrepancies in the records of instances of the said action, which discrepancies or peculiarities demand reconciliation or explanation at the hands of competent scientific experts.—*Pharm. Journ., Lond.,* February, 1864, from *Proceedings of the British Association.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

MAY 9th.—*Spontaneous Hæmorrhage in a New-born Child.*—Dr. MINOT reported the case.

The patient was a female child, born April 15th. The mother was delivered with forceps, on account of inefficient pains, after a labor of 26 hours, the liquor amnii having been discharged six days previously. The child was large and vigorous, weighing nine pounds. From the time of its birth it frequently vomited a brownish liquid, until the afternoon of the 18th, when it began to bleed freely from a slight scratch, made by the forceps, on the frontal bone. At the same time it vomited blood freely, and ecchymotic spots appeared on the tongue and roof of the mouth. A large spot occupied the right temple and covered the side of the neck. Others appeared on the elbows and malleoli. The bowels were free, the stools of natural color. Urine natural. No jaundice, though a slight straw-colored tint appeared on the skin. The child moaned and seemed to be distressed when awake, but slept a great deal. There was no hæmorrhage from the navel.

Perchloride of iron was applied to the bleeding spot, and permanently arrested the flow. A weak solution of the same was given internally every two hours, with wine whey, and injections of milk. The child nursed freely throughout. The symptoms were immediately arrested, and the child gradually recovered. The cord separated on the 6th day without hæmorrhage.

An interesting fact in relation to this case is, that a cousin of the patient by the father's side (also a female) died soon after birth from umbilical hæmorrhage. Although there happened to be no bleeding from the navel in this case, it must evidently be classed under the head of "umbilical hæmorrhage," the chief characteristic of which is a disposition to spontaneous hæmorrhage from various parts, in new-born infants. This case resembles one formerly reported to the Society by Dr. Coale, in which, also, there was no bleeding from the umbilicus; the child was apparently saved by the exhibition of dilute sulphuric acid.

MAY 9th.—*Symptoms of Cerebro-Spinal Meningitis; doubtful appearances of Disease of the Pia Mater, of the Brain and Spinal Cord.*—Dr. ELLIS reported the case.

A child, 7 years of age, was attacked eleven weeks before death with fever and pain in the frontal region. Ten days after the commencement of the disease, the head was drawn strongly backwards, and opisthotonos became so marked that the shoulders did not touch the bed. This continued until three weeks before death. The pupils were dilated from the commencement until the last day, when they became contracted. Though delirious, the child could always be roused. The pulse at the outset was extremely rapid, hard, full and strong, and so continued for more than six weeks, when it became nearly natural. No nausea nor other symptoms referable to the digestive organs. No chills. No petechiæ until towards the close, and then only to a slight extent. The above were the principal symptoms, obtained from Dr. Holmes, of Milton, who had charge of the patient. There were no special changes towards the close, and death seemed to result from exhaustion.

On examination of the head, the arachnoid was found dry, and the convolutions somewhat flattened. The lateral ventricles contained from four to six ounces of clear serum. The membranes of the base had a slightly opaque appearance, and were somewhat infiltrated, but there were no miliary granulations nor other evidences of disease. The arachnoid and pia mater of the spinal cord were, perhaps, opaque, and somewhat peculiar, but neither the changes here nor in the membranes of the brain would have attracted special attention, had it not been for the epidemic of cerebro-spinal meningitis prevailing at the time. The thoracic and abdominal viscera were not examined.

The case was regarded as interesting, inasmuch as morbid appearances not unfrequently met with were accompanied by symptoms which pointed to a lesion of the membranes of the brain and spinal cord, and yet the latter could not be clearly shown to exist. May it not indicate that the symptoms of ordinary disease can be modified by the prevailing epidemic influence, although peculiar lesions are not satisfactorily made out?

May 23d.—*Croup; Tracheotomy; Recovery.*—Dr. Cabot reported the following case.

"F. S., rather a delicate boy, 2 years and 6 months old, had been somewhat ailing for a week on Sept. 7th, and was slightly hoarse. I saw him on the 8th, found him slightly hoarse and with a pulse a little quick. On looking into his throat, found the posterior fauces covered with false membrane; none in front of anterior pillars of palate. Ordered chlorate of potash, generally and locally, generous diet, and stimulants. His appetite was quite good until the 10th, when it began to fall off. The false membrane had entirely disappeared from the throat by the 10th, but the hoarseness had increased, and the breathing became worse and worse until the 11th, when it had become so labored as to cause lividity on several occasions. On the 12th, the pulse had risen to 120 or 130, somewhat intermittent; respiration very labored, and evidently suffocation was imminent. I desired a consultation, and Dr. Buckingham met me at 10, P.M. He agreed with me that tracheotomy afforded the only chance, and I accordingly opened the trachea. There was no bleeding, and a few minutes after the operation two large pieces of false membrane were thrown up. From that time but very small bits were ever seen, and the child went on steadily to recovery. The tubes were removed on the 17th, five days after the operation, and the child is now (23d) well, excepting a slight cough.

"The points of special interest are:—1st. The extent of false membrane in the fauces, allying the case to diphtheria. 2d. Severity of croup symptoms, with so limited a deposit of false membrane in the trachea. 3d. Rapidity of recovery; and, 4th. The absence of all perturbing, depressing or narcotic treatment, from first to last. To which last, or rather to the pursuance of a precisely opposite plan, viz., sustaining and stimulating, I attribute in great degree the favorable result of the case."

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, JUNE 16, 1864.

Annual Meeting of the American Medical Association.—The annual session of the American Medical Association was held in New York during the past week. The delegates assembled on Tuesday, and filled Irving Hall, which had been selected as the place of meeting. The profession was well represented by prominent members from the loyal States, who seem to have produced a very favorable impression upon the popular mind, judging by newspaper reports, for the gravity and dignity of their bearing. The meeting was opened in due form by Dr. Alden March, the retiring President. His address is spoken of as a most able and eloquent effort. The usual introductory business was transacted, and a nominating committee of twenty-one reported the following list of officers for the year:—For *President,* Dr. N. S. Davis, of Illinois. *Vice Presidents,* Dr. William H. Mussey, Ohio; Dr. Worthington Hooker, Conn.; Dr. William Wheelan, District of Columbia; Dr. F. E. B. Hintze, Maryland. *Treasurer,* Dr. Caspar Wister, Pa. *Secretary,* Dr. G. Furman, New York.

It was voted that the next meeting of the Association be held in Boston.

Considerable discussion took place with regard to the report of the Committee of Nomination, which finally resulted in the election of the entire list presented. The President's address was followed by a report from the Committee of Arrangements and other matters of incidental business, of which we hope to give a fuller report hereafter.

On the second and third days about half of the time of the meetings appears to have been occupied by merely business matters. A number of papers were read, and the several Standing Committees appointed for the next year. Friday, the last day of the session, was devoted to visiting the various hospitals and City Institutions in and about New York. The delegates were hospitably entertained at Blackwell's Island, and a steamboat trip gave them an opportunity of enjoying the picturesque scenery in the neighborhood of the city.

We hope in our next number to give a fuller account of this meeting than the meagre skeleton above. We have been disappointed in receiving the report we had looked for, and are unwilling to trust the daily newspapers for lists of committees and matters of a purely professional character, and must therefore defer their publication to another occasion.

INTERNAL ADMINISTRATION OF BELLADONNA IN CASES OF SEVERE BURN.—Experimental physiologists have recommended belladonna for use in the treatment of burns, in the belief that it diminishes that state of the nervous functions under which reflex inflammations are likely to be originated. They assert, on the other hand, that of all remedies opium is the one most powerful in increasing this peculiar state, and that it ought consequently to be avoided. In clinical practice, however, we believe that this opinion is wholly disregarded, and that opium is the form of anodyne most commonly resorted to in these cases. Yet it is generally suspected that the causes of death after burns are, in a majority of instances, connected with reflex inflammations, *e. g.*, ulcers of the intestine, pneumonia, &c. In a series of cases recently under Mr. Hutchinson's care in the London Hospital, the belladonna treatment has been tried. In some remarks at the bedside of a patient, the other day, Mr. Hutchinson stated that he considered the general results to have been fairly satisfactory. He adverted to the extreme difficulty of forming a trustworthy conclusion on such a matter, since these cases are, in their nature, never stationary, but always tend either to improvement or the reverse, and often with great rapidity. If, therefore, the remedy were commenced when the patient was very ill, it might chance to be just at the time when improvement was about to set in ; and if, on the other hand, the patient got worse, it might fairly be alleged that the remedy was used too late. If, on the other hand, we should give it in cases in which, as yet, no serious symptoms had appeared, we might again be much led astray, since a great majority of burn cases do well without any special plan of medication. Mr. Hutchinson stated that the cases in which the remedy had seemed to be most useful, were those of children in whom general febrile symptoms, attended with restlessness, loss of appetite, &c., had set in without any local complications. In several of these, there could be no mistake that the feverish state had passed away quickly and very satisfactorily under the use of belladonna. In no cases had he witnessed any ill results. If the burn itself was very painful, and the patient unable to get sleep on account of the pain, then the belladonna seemed comparatively inefficacious to procure ease, and morphia was far more efficient. As a rule, no opium had been given to the cases treated by belladonna ; but in a few, and those chiefly in adults, it had been found requisite to give an occasional night dose. Possibly more benefit might have been obtained had the administration of the belladonna been pushed to larger doses. The usual dose given had been a third of a grain three times a day. In speaking of the less frequent results of burns, Mr. Hutchinson mentioned a recent case in which acute inflammation of one hip-joint, followed rapidly by dislocation, had occurred in a child who had been severely burnt on the arm and chest. He was in doubt whether to regard it as a reflex inflammation, or as a consequence of pyæmia.—*London Medical Times and Gazette.*

Births and Deaths in London.—The last quarter of 1863 was remarkable for the small number of births and deaths in the city of London. That of births was the smallest on record, for it reached only 668, the average for the corresponding quarter of the last ten years being 807. The deaths also were below the average in the proportion of 699 to 749. The number of deaths, too, in the quarter, had been greater than the births, an occurrence scarcely known except in the cholera year, 1854, when there were 939 deaths to 789 births.—*Lond. Lancet.*

Red Blood in the Veins.—Dr. Brown-Séquard arrives at the following conclusions regarding the color of venous blood. 1. The blood is of a less deep color in the veins of limbs paralyzed by section of their nerves or by destruction of a part of the spinal cord, than in the veins of sound limbs. 2. The diminished depth of color in the veins of paralyzed limbs is due, at least in part, to the state of inaction of the muscles. 3. Paralysis of the bloodvessels may also produce a reddish color in the venous blood. 4. It is especially through their influence in exciting muscular contraction, that the nerves and galvanism increase the intensity of the dark color in venous blood.—*Canada Lancet,* from *British Medical Journal.*

Mortality of Providence, R. I.—There were 89 deaths in Providence during the month of May. The mortality was no more than the average, increased for the increase of population. There were 14 deaths from scarlet fever, a greater number than in any month since April, 1858. There were also 5 deaths from diphtheria, 2 from whooping cough, 1 from measles, and 3 from croup, making 25 deaths from these five diseases. During the first five months of the present year, there have been 33 deaths from scarlatina, showing that the disease is again on the increase. Smallpox still continues in the city, mostly in the modified form, usually called varioloid. There has not been a death from smallpox, in Providence, since March 31, 1862.

Effects of Sugar on Teeth.—"The action of sugar upon the teeth is an undecided question. Popular belief is to the effect that the use of much sugar, and particularly of candies and sweetmeats, is a common cause of dental caries. Drs. Paolo, Mantegazza, and Labus, of the University of Pavia, have recently undertaken a series of experiments to settle the matter. A translation of their paper may be found in the February number of the *British Journal of Dental Science.* The chief conclusions to which these investigators have come are—1st, that sugar (as sugar) does not exercise any chemical action upon the teeth, and that it does not predispose to caries; 2dly, that sugar only affects the teeth when it has undergone the acetic or lactic fermentation."—*Lancet.*

The Mississippi Valley Dental Association have offered a prize of $100 for the best essay on Anæsthetics, to be approved by a Committee of the Association; the copyright to belong to the Association.

Mr. Edward Parrish, a pharmaceutist of Philadelphia, has been elected Professor of Materia Medica in the Philadelphia College of Pharmacy, in place of Robert P. Thomas, M.D., deceased.

Stephen G. Hubbard, M.D., of New Haven, has been elected Professor of Obstetrics in Yale College to fill the vacancy occasioned by the resignation of Dr. P. A. Jewett.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, June 11th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	52	35	87
Ave. mortality of corresponding weeks for ten years, 1853—1863,	34.0	32.5	66.5
Average corrected to increased population - - - - -	00	00	73.21
Death of persons above 90 - - - - - - - -	0	0	0

Died,—At North Amherst, June 10th, suddenly, of apoplexy, Dr. Seth Fisk, probably the oldest practitioner in Hampshire County.—At Keene, N. H., June 8th, Dr. Daniel Adams, aged 90 years. Dr. Adams was the author of the Scholar's Arithmetic and other school books, and for a long time a resident of this city.

Deaths in Boston for the week ending Saturday noon, June 11th, 87. Males, 52—Females, 35.—Abscess, 1—accident, 3—alcoholismus, 1—congestion of the brain, 1—disease of the brain, 4—inflammation of the brain, 2—bronchitis, 3—burns, 1—cholera infantum, 1—consumption, 13—convulsions, 2—croup, 5—debility, 2—diphtheria, 1—dropsy of the brain, 2—epilepsy, 1—erysipelas, 1—scarlet fever, 6—gastritis, 1—hæmorrhage, 3—disease of the heart, 3—infantile disease, 3—intemperance, 4—disease of the kidneys, 1—inflammation of the lungs, 3—marasmus, 1—measles, 1—paralysis, 3—premature birth, 3—rheumatism, 1—smallpox, 2—suicide, 1—syphilis, 1—tumor, 1—unknown, 5.

Under 5 years of age, 38—between 5 and 20 years, 9—between 20 and 40 years, 19—between 40 and 60 years, 12—above 60 years, 9. Born in the United States, 58—Ireland, 23—other places, 6.

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DIAGNOSTIC IMPORTANCE OF EXAMINATIONS OF THE URINE.

An Address delivered before the Middlesex South District Medical Society, at Waltham, April 20, 1864, by Alfred Hosmer, M.D., of Watertown.

[Communicated for the Boston Medical and Surgical Journal.]

Mr. President and Gentlemen of the Middlesex South District Medical Society,—Much to my regret, I find myself authorized by the Society's vote to inflict upon you the ordinary ceremony of an annual address. I trust you come here with reasonable expectations, or rather with no expectations at all. I take it for granted, that at this time and place, you do not await the results of independent personal observations, as declared in the announcement of some new discovery, or in the promulgation of some plausible and attractive theory which may explain phenomena hitherto mysterious, or associate in a new, but obvious and rational relation, isolated and apparently disconnected facts. Fortunately for my inevitable short-comings, novelty and originality are admitted not to be characteristic of such productions as this; and the narrow limits of my resources will compel you to listen to that with which you are already thoroughly familiar. But if we cannot increase our knowledge by the addition of what is new, by an undoubted acquisition, it is not impossible for us to reinforce and strengthen it, by reviewing, reviving and renewing what we have once learned, but more or less completely forgotten.

With us, advancing years and enlarging experience fill the mind with the higher and broader truths and principles of science; a process which strongly tends to the obliteration, or rather inadvertent forgetting of the smaller facts and lesser details, the elements, so to speak, which once constituted the whole stock of our knowledge, and were the foundation on which was based all its actual or possible increase. Hence it may prove really profitable to consider with a little more of care and thought than is usually bestowed upon it, a subject which you may deem common-place, and which ought, you may say, to be fully comprehended even by junior students still rejoicing in the supposed, but untried and unproved attractions of medicine, and rapidly attaining that consciousness and conviction of omniscience, so often begotten in immature minds by elementary studies.

The functions of a medical practitioner, regarded simply in his professional relations, may be distributed under three heads; viz., the diagnosis, the prognosis, and the treatment of disease. It were almost superfluous for me to assert what has been stated so often with such force and emphasis as to forbid contradiction, and to command the ready assent of all men of the least genuine, honest scientific pretension; viz., the incalculable and paramount importance of diagnosis, correct diagnosis, complete—pathological and therapeutical. That skill in diagnosis is the real power of the physician, we have abundant and convincing evidence in the fact that all men who are truly eminent, all who are considered strong men in the profession, are those who can see what they look at, who can appreciate symptoms, and recognize disease, as by a ready and rapid intuition; those, in short, who possess marked diagnostic ability. "*He is a great physician*," says Dr. Jacob Bigelow, "*who, above other men, understands diagnosis*."

A reliable and satisfactory diagnosis made, we abandon a position perplexed by doubt and uncertainty; we stand in the clear and unmistakable light of positive knowledge; we no longer hold opinions, in so far as the term implies and includes anything of conjecture, but we know, and what is better, we are self-assured that we know.

With such knowledge, prognosis ceases to be merely making a guess which has not more than an even chance of not being wrong; it assumes the character of a logical process, and enjoys the probability of being intrinsically correct, and not accidentally coincident with the issue of a case.

It may be speciously claimed that, in a limited sense at least, prognosis should take the precedence of diagnosis, because an unprofessional person, of his own unaided observation and judgment, can verify or falsify predictions made with reference to the future course and termination of disease now in progress. The fact we admit as self-evident, remembering at the same time that questions of diagnosis can be settled by professional authority alone; that their decision cannot be criticised and revised by non-medical parties; that such questions often lose their interest by reason of a recovery; that they are often placed beyond the possibility of finding out by a *post mortem* forbidden; that the careless and imperfect autopsy of an observer, not unprejudiced, may only confirm him in erroneous opinions to which he is already committed. The fallacy of such reasoning is apparent when we reflect that popular reputation is not the measure or the synonyme of professional worth and strength; that a man has no standing who does not stand well in the estimation of the members of his own profession; that he can hold no rank beyond what is accorded by them, who alone are competent to judge his qualifications and determine his merits.

It is but the repetition of a truism to say that correct diagnosis is absolutely indispensable to scientific, judicious, successful treatment; it is the corner-stone of the system of rational medicine so-called; without it, our experience, if the word can be allowed at all in such a connection, is worthless, and can never in the least degree enrich the science or improve the art of therapeutics; without it, the experience accumulated, and appropriate methods of treatment recommended by others, predecessors, or contemporaries, are entirely lost to us; they are unavailable, because our ignorance renders them inapplicable.

The opportunity and facility which diagnosis alone can furnish for the study and knowledge of the history of individual diseases, is an obvious point which I need not dwell upon.

If diagnosis, then, is a matter of such vital importance, errors of diagnosis cannot be of little moment. Strict justice, however, and a becoming regard for professional credit, require us to admit that there are unavoidable errors, while we must lament the existence of another class which are the necessary and legitimate result of careless observation. Unavoidable errors may occur, if a diagnosis be attempted in cases of some new, anomalous, unheard-of and undescribed lesion. They may also occur when a disease fails to express itself by the distinctive combination and succession of symptoms commonly attending, and taken to be characteristic of it; when it simulates another disease, or when it is accompanied by some unusual and exceptional symptoms, which exist as an inexplicable peculiarity in the case, or as the result of some unsuspected complication. The laws and rules of diagnosis presuppose and depend upon a tolerable uniformity and regularity in the modes and effects of the pathological processes of nature, who "is under a tacit contract of probability to always do as she has already done;" and physicians are no more accountable and responsible for the irregular and capricious manifestations of morbid action, than a surgeon would be for some unexpected deviation from ordinary anatomical structure, which should defeat the purpose of an operation commonly successful. Errors, temporarily unavoidable, may occur if a diagnosis be prematurely made in those cases in which disease is still in an incipient stage, before it has had time to complete its own expression by the development of intelligible and easily interpreted symptoms. Whose senses are keen enough, whose sagacity shrewd enough, by direct exploration or indirect inference, to discover and declare the commencing malignant growth in the liver, for instance, which in time shall double the weight of the organ? or the incipient unsymmetrical dilatation of the aorta, which dooms the patient finally to a fatal hæmorrhage by the bursting of an aneurism? or the deposit of the first tubercular atoms in the lungs, which by subsequent growth and aggregation shall disable or destroy a large portion of the pulmonary tissue? or the earliest deterioration of structure, and fatty transformation of tissue, in the heart, which at a later date shall produce sudden death, the cause of which might easily be overlooked in an ordinary autopsy?

Thus briefly of the unavoidable errors of diagnosis. Let us now pass to those which originate in careless observation. To mistake an undoubted luxation of the shoulder, and call it a sprain; to consider an obvious fracture of the cervix femoris a contusion; to call membranous croup ulcerated sore throat; to designate as neuralgia a case of large internal abscess freely discharging pus into the urinary passages, and attended by well-marked constitutional symptoms; to find the intermittent, expulsive pains of an abortion, amenable to, and controlled by, the anodyne influence of invisible and imponderable doses of belladonna; to attach to a case of confluent smallpox the innocent and unsuspicious designation of a non-contagious cutaneous affection; to declare that an elderly person dying with obvious pneumonia is sinking from old age and debility; to overlook an extensive hydrothorax, and attribute the attending cough and dyspnœa to a "cold": such mistakes as these prove those who commit them to be grossly careless and culpable, and convict them of no small degree of incompetence. Circumspect, cautious, careful observation will surely prevent such errors, and save the physician from the disgrace, and the patient from the detriment and damage, resulting therefrom.

But to terminate a long preface, which I hope you will not consider altogether irrelevant, I ask your attention to what more immediately concerns us to-day, viz.—the importance and utility of examinations of the urine in deciding questions of diagnosis.

Dr. John Ware, in his admirable lectures on General Therapeutics (Boston Medical and Surgical Journal, Vol. LXIV., p. 130), says:—"A hasty, an indifferent or a random mode of investigation may lead us to overlook symptoms that are not prominent—that are even latent—and yet should have an important bearing on our judgment. Such, among many examples, are the presence of sugar or albumen in the urine. They do not obtrude themselves on the attention either of the patient or the physician, they are latent; they must be sought for at the expense of a little trouble. But in reality they are each often the key to the character of the case in which they appear, and decide its result. *Their detection will serve to clear up what was before a vague and promiscuous mass of symptoms.*"

Although the whole truth of the matter is so succinctly stated by such undeniable authority, and although a quotation so pertinent might seem sufficient to save me the trouble of proceeding any farther, you will pardon me if I attempt to expand the subject a little, and place it in the strongest possible light by a special discussion of its details.

As the excretion under consideration is the direct product of renal action, it would seem to be the more easy and natural course to first inquire to what extent observation of the condition of the urine will enable us to detect disease of the kidneys, the pathological interest of which organs may be inferred from their physiological importance. A hasty comparison will show that these organs, for reasons both anatomical and physiological, stand in a peculiar relation to the ordinary means and modes of exploration. In the case of the thoracic and many of the abdominal viscera, a morbid condition may be unequivocally indicated by an appreciable change in some organ, in respect of its form, size, density, or position, which change is readily discovered by palpation or percussion. The character of the contents of the chest, resonant or non-resonant, will declare itself by no uncertain or doubtful sound to him who but once asks the question of density with his fingers' ends. Disease of the liver, of the uterus, or the ovary, may almost obtrude and force itself on the attention, by enlarging the organ, altering its form, and in a certain sense changing its position by extending its natural limits. Disease, also, may be distinctly indicated by the derangement and disturbance of functions that are mechanical, or by the production of sensations, painful or otherwise, in connection with the action of organs of which there is ordinarily no knowledge or consciousness. We all know how pneumonia or pleurisy will modify the respiratory movements; how hypertrophy of the heart will increase the force of its impulse; how gastric digestion and peristaltic action may be attended with great discomfort; how defæcation may produce extreme suffering. Moreover, it often happens that a single look, as at the rusty sputa of pneumonia, or the coffee-ground vomitus of cancer of the stomach; at the clay-colored stools of jaundice, or the bloody and slimy discharges of dysentery, will tell at once the disease with which we have to deal. Lesions in the cranial cavity, though often obscure and beyond the reach of direct investigation, may give rise to the most marked and unmistakable signs of disordered cerebral action. What can be more apparent than an effusion of blood in the brain, producing paralysis, partial or general, complete or incomplete, and suspending intellectual manifestations?

In a general sense, the kidneys, from their concealed and inaccessible situation, cannot be made the subject of direct tactile examination. There are two exceptions to this. There is the case of movable kidney, a natural curiosity which I have been fortunate enough to meet with once, in which in certain positions of the body, the organ is displaced so far forwards that it can be grasped by the hand through the abdominal walls. But no benefit is likely to be derived from this rare and exceptional condition, as the chances are altogether against the coincidence of renal disease and this peculiar mobility of the organ in the same individual. And besides, in many important affections of the kidney, there is no very considerable change of size or form, certainly not to the same degree as is found in the liver, uterus or ovary.

The second exception is to be found in the case in which the organ, from cystic or cancerous disease, or large puriform accumulations, actually forms an abdominal tumor. Yet even here, with the advantage of direct manual examination, diagnosis is admitted by Dr. Bright to be extremely difficult, and often incorrect. The conditions under which the secretion of urine goes on, in health and disease, render it impossible for us to have any idea or knowledge either of the normal process or the deviations therefrom. The urine, too, may abound in a morbid element, indicative of active, progressive, fatal disease, and yet, without the application of appropriate chemical tests, present no appearance whatever suggestive of an unhealthy condition. From these facts I think it must be evident that in numerous cases the only means we have of determining whether there is disease of the kidney or not, is to examine the urine; and, as you no doubt already understand, I refer more particularly to cases of albuminuria.

The necessity of the examination to which I allude will appear all the more urgent when we reflect upon the results of clinical observation, which show that in these cases the symptoms consist of various disturbances in portions of the system quite remote from the seat of the fundamental difficulty; that there is nothing about them which, of any necessity, would be likely to suggest their renal origin to an inexperienced observer; that, on the contrary, they may completely divert the attention from their cause, and occupy it fully with effects, which, to be sure, may not be of small magnitude or little importance; that such disease may remain for a certain period latent, or at last suddenly declare itself by the development of some consecutive, secondary disease, so obvious and well-pronounced that it cannot be overlooked, and sufficiently serious, even if it had occurred as a primary affection in a subject otherwise sound, to explain the fatal terminations which are so likely to take place.

I doubt not you will all acquiesce in the correctness of my views. Still I think it will not be inappropriate or uninteresting if I attempt to illustrate and substantiate what I have said, by the introduction of cases of which I have had personal knowledge.

The subject of the first case was a gentleman, aged 68, all whose antecedents seemed eminently favorable for prolonged life and uninterrupted health. He first consulted me May 10th, 1858, on account of certain disorders of the digestive organs. He complained of a disagreeable taste in his mouth, with a thickly coated tongue, unnatural thirst, occasional nausea, and unusual constipation, together with some uncomfortable sensations about the head, which increased or diminished according as the bowels were more or less sluggish. In a month the patient returned, saying that he had experienced temporary relief from my prescription, but that he had relapsed, and was then suffering from his old symptoms in a somewhat aggravated form. As before, transient benefit followed treatment, but the remedies once satisfactory in their action failed, ere long, to produce the desired effect, and late in the month of July (23d) I was called to the patient, and seriously asked why he did not get well; if any incurable malady rendered recovery impossible. The closest interrogation, and the most careful and thorough physical exploration did not discover any organic disease. There was no dropsy; there was neither anæmic decoloration nor icteric or cachectic discoloration, nor did these symptoms ever appear. The pulse was unchanged in frequency; the countenance so nearly natural that his friends and family declared he could not be seriously ill. As on former occasions, he laid particular stress on the digestive derangements, the coated tongue, bad taste in the mouth, nausea and constipation, which to his mind fully explained the loss of strength, the slight emaciation, and mental inaptitude which he had observed in his case. As to the urinary organs, the patient thought he voided rather more urine than was natural, and knew that he was somewhat annoyed by intolerance of the bladder. In these things there was nothing very significant, but when I tested the urine by heat and nitric acid, I discovered that I had a well-marked case of albuminuria. The albumen, thus found, explained all that had preceded, and proved the true character of the case beyond all possible doubt. But to the sequel; the case went on, the condition of the patient varying somewhat from day to day, but the unfavorable changes, of course, predominating, until August 28th, when the patient had a well-marked apoplectic seizure early in the day, and died the same evening. At the autopsy, I found a pair of granulated kidneys, diminished in size by atrophy of the cortical substance.

The case is instructive, and scarcely requires any comment. It is easy to conceive how the albuminuria and the renal disease it indicated could have been overlooked; how the disturbance of the functions of the alimentary canal could have been considered primary; how the apoplectic attack could have been regarded as an accidental, intercurrent affection, having no connection with the other symptoms, and being in this case, as it may sometimes be, the sole cause of sudden death. But the albuminuria, by the morbid renal condition that it implied, explained perfectly all the other symptoms, and by combining and associating them with itself, gave unity to the case.

[To be continued.]

THE Paris Hospital Medical Society propose the following subject for the Phillips prize of 1000 francs:—"Establish by means of positive facts the prophylaxis and curability of the form of meningitis termed 'tubercular.'" Essays to be written in French.

Reports of Medical Societies.

Annual Meeting of the American Medical Association.—From the full report of the Proceedings, published in the New York *Medical Times*, we condense the following, which circumstances prevented us from giving our readers last week.

The list of officers, elected for the next year, which was incorrectly printed in a portion of our last edition, is as follows:—*President*, Dr. N. S. Davis, of Illinois. *Vice Presidents*, Drs. W. H. Mussey, Ohio; Worthington Hooker, Conn.; William Wheelin, Ind.; Dr. F. E. B. Hintze, Maryland. *Secretary*, Dr. G. Furman, New York. *Treasurer*, Dr. Caspar Wister, Pa.

After some matters of incidental business, the President appointed the following Committee to examine all voluntary communications:—Drs. A. B. Palmer, H. F. Askew, S. G. Hubbard.

Dr. Cyrus Ramsay, N. Y., moved that the regular order of business be suspended, and that the proposed amendments of the Constitution be taken up; which was carried, and the following amendment introduced:—

Amendment of the Constitution in relation to Permanent Secretary.—It is hereby ordered that Article 4, Sec. 1, of the Constitution be amended as follows:—From the 2d line strike out the words "two Secretaries," and insert "one Permanent and one Assistant Secretary;" and in the 5th line, after the word "officer," insert the words "except the Permanent Secretary;" also add to the same section the following: "the Permanent Secretary shall hold his appointment for ten years, unless sooner removed by death, resignation, or a vote of two thirds of the members present at a regular annual meeting."

And be it further ordained that Section 5 of the same article be stricken out, and the following substituted in its place, viz.: "The Permanent Secretary shall record the minutes and authenticate the proceedings, give due notice of the time and place of each next ensuing annual meeting; notify all members of Committees of their appointment and of the duties assigned to them; hold correspondence with other permanently organized medical societies, both domestic and foreign; serve as a member of the Committee on Publication; see that the published Transactions are promptly delivered to all the members who have paid their annual assessment, and carefully preserve the Archives and unpublished Transactions of the Association.

The Assistant Secretary shall aid the Permanent Secretary in recording and authenticating the proceedings of the Association; serve as a member of the Committee of Arrangements, and perform all the duties of Permanent Secretary temporarily, whenever that office shall be vacant either by death, resignation, or removal.

And be it further ordained, that to Article 6, Section "*second*," be added after the word "meetings," in the second line, the following, viz.: "including the necessary expenses of the Permanent Secretary in maintaining the correspondence of the Association."

After reading the amendments, Dr. Jewell, of Pennsylvania, moved to strike out from the last clause, "attending the regular meetings," which motion was adopted.

Dr. Nebinger, Pa., moved to strike out the word "ten" in the second paragraph, and substitute "five;" which was lost.

Dr. Griscom moved to strike out all that related to a specified term of years.

The previous question being called for and sustained, the amendment of Dr. Griscom was carried.

The question recurring on the adoption of the proposed amendments as amended, it was finally carried in the affirmative.

The Association then adjourned until 10, A.M., of the day following, June 8th.

Wednesday, June 8th.—Morning Session.

The Association was called to order by the President, N. S. Davis, at 10, A.M.

On motion, the following gentlemen were elected permanent members:—Drs. Brown-Séquard, Boston, Mass.; Jno. P. Gray, State Lunatic Asylum, Utica, N. Y.

The reports of the Standing Committees were next called for in regular order, and referred to their appropriate sections.

Treasurer's Report.—The report of the Treasurer, Dr. C. Wister, showed a balance on hand of $449.02. Only about 120 copies of volume xiv. have been sold during the past year.

Report on Compulsory Vaccination.—Dr. Jas. F. Hibbard, Chairman of the Committee on Compulsory Vaccination, read a report in which it was contended that the adoption of the measure was impracticable, concluding with the following resolutions:—

> *Resolved*, That a committee of be appointed to supervise and control, under the direction of this Association, all matters pertaining to general vaccination.
>
> *Resolved*, That a committee of be appointed in each State to superintend the measure in its State, which committee shall be subordinate, auxiliary, and advisory, to the Central Committee.
>
> (Signed) JAS. F. HIBBARD, *Chairman.*
> WILSON JEWELL.
> JNO. H. GRISCOM.

Adopted, and referred to the section on Public Health.

Dr. A. K. Gardner, of New York, offered a preamble and resolutions, declaring that medicines and medical and surgical instruments and appliances ought not to be considered contraband of war, and that the common interests of humanity, as well as the special interests of Northern soldiers in Southern captivity require that, under proper restrictions, they should be allowed to be conveyed, under flag of truce, within the lines of the rebel States. On motion, the consideration of the resolutions was indefinitely postponed.

Increase of Rank and Pay of Medical Staff of Army and Navy.—Dr. C. C. Cox offered a resolution to increase the rank and pay of medical officers of the army and navy.

Dr. Frank H. Hamilton urged the passage of the resolution by some well-timed and appropriate remarks, after which the question was put and carried unanimously.

The Chair appointed a committee, composed of the following gentlemen, to report upon the same, and prepare a memorial for the action of Congress:—Drs. McGugin, Iowa; Antisell, Washington, D. C.; F. H. Hamilton, N. Y., and Askew, of Delaware.

The Association then adjourned until 10, A.M., of Thursday, June 9.

The afternoon was occupied in the meeting of the different sections.

Thursday, June 9th.—Morning Session.

The Association was called to order by the President shortly after 10, A.M.

Surgeon C. C. Cox, Chairman of the Committee appointed to memorialize the President of the United States in reference to the increase of rank and pay of medical officers of the army and navy, moved that Dr. Charles S. Tripler be added to that Committee, and be appointed Chairman of the same. Carried.

Time of next Meeting.—On motion of Dr. Askew, of Delaware, it was agreed that the time for the next meeting of the Association should be on the first Tuesday of June, 1865.

Reports of Standing Committees.—The reports of the Standing Committees were again called for, with the following results :—

Committee on Insanity.—Dr. R. Hills, of Ohio, the Chairman of the Committee, in a note addressed to the Association, reported progress and asked for further time, promising an elaborate report if such a privilege were granted.

It was then carried that the time should be extended ; and on motion of Dr. Griscom, Dr. E. H. Van Duser, the Medical Superintendent of the State Lunatic Asylum, Kalamazoo, Mich., was added to the Committee.

Committee on Prize Essays.—The Chairman of the Committee not being present, the calling for the report was deferred.

Report of Sections.—Dr. S. W. Butler, of Philadelphia, the Chairman of the Section on Medical Topography and Epidemic Diseases, presented a report, which was adopted in full, and the following gentlemen were appointed as members of the Committee to carry out the spirit of the resolutions appended to the report of the Committee on Compulsory Vaccination :—Drs. A. N. Bell, Brooklyn ; J. P. Loines and H. D. Bulkley, N. Y. ; A. Nebinger, Philadelphia ; and J. F. Hibbard, Ind.

Report on the Practical Workings of the U. S. Law relating to the Inspection of Drugs and Medicines.—Dr. Squibb, the Chairman of the Committee on the Practical Workings of the U. S. Drug Law, made a statement to the effect that the gentlemen who composed that Committee could not agree upon the report prepared for their action ; and, inasmuch as at the time it was presented for their consideration there was not opportunity for an interchange of views upon the subject, they respectfully request that, as a Committee, they should be discharged.

On motion of Dr. Gardner, the report of the Committee was accepted and the Committee discharged.

Dr. Squibb then proceeded, by invitation, to present his views upon the subject, in the form of a voluntary communication. He contended that the practical working of the law was to all intents and purposes a dead letter, and that the Secretary of the Treasury had not acted upon the earnest solicitations of the Committees from the different Societies and Colleges in New York who had been appointed to memorialize him upon the subject, but had made an appointment without qualifications, which could be ascertained at the time, or which have since been manifested in the duties of the office, since drugs of very inferior quality were constantly passed through the Custom House. As an example he instanced several articles, among which were those of jalap and scammony, which were, on examination, found to contain a very small per cent. of active principles—much below that which the law prescribes. He threw out the suggestion that, considering the facts of the appointment of the present inspector, it would be of little use to make any further requests to the appointing power.

In conclusion, he stated that he alone was responsible for the statements contained in the paper, and that Dr. Bowditch, one of the Committee, declined to sign a report which he considered of a partisan character, reflecting upon the officers of the General Government at the present time. Dr. Carson, the other member of the Committee, did not wish, as a matter of principle, to sign a paper until he was satisfied, from personal observation, that all the statements therein contained were correct.

After some discussion, the report of Dr. Squibb was accepted, after which—

Dr. S. R. Percy, of New York, remarked that Dr. Squibb had labored under a false impression in making the statements contained in the paper; and further stated that the appointment of Drug Inspector was made by Secretary Chase in perfect good faith, and with the conviction that it would meet the end for which such an appointment was designed. That gentleman had made diligent search for the right man, and, as the result of very numerous recommendations from reliable men of the profession, had selected the present incumbent. Concerning the honesty of the present Inspector, Dr. Percy was prepared to vouch, from a personal knowledge of that gentleman's character, and he could confidently assert that every endeavor had been made to discharge the duties of the responsible office with fidelity. Every specimen that it was possible to examine was carefully examined before it was allowed to pass, and he could not conceive upon what foundation Dr. Squibb had made his assertions. In conclusion, he did not think it came within the province of the Association to endorse any stigmas made against any one; and, as a friend to the Inspector, he felt that it was his duty publicly to defend him.

Dr. Squibb remarked that he was not acquainted with the Inspector, and did not allude to any one by name, but he merely had presented facts which came to his knowledge, leaving the members to draw their own inferences. He only referred to the two articles, scammony and senna, stating that he had examined specimens of the former article which contained as low as 15 per cent. of the active principle, instead of 70; and of the latter article, which contained from 10 to 55 per cent. of sticks and stones, and which in that condition had passed the Custom House.

A motion was made to refer the paper to the Committee on Publication, with discretionary power, which was lost.

Dr. Curry, of Westchester Co., spoke at some length against the general practice of referring papers to the Publishing Committee, urging as an argument against it that many communications would find their way into the volume which would not be entitled to it, and thought that the Committee should have ample discretionary power in the matter. He did not wish it to be understood that his remarks referred to Dr. Squibb's paper, but only wished the principle of the thing to be discussed.

The President stated that the discretionary power belonged to the section to which any paper might be referred, and suggested the propriety of referring Dr. Squibb's paper to the Section on Chemistry.

Dr. McFarland, New York, thereupon made a motion to refer it to that section, which was carried.

Report of Section on Practical Medicine and Obstetrics.—Dr. Storer, Boston, read a report of the meeting of the Section held the afternoon before, and concluded the same by presenting the following resolutions, which were appended to his paper, and which we have already alluded to:—

Resolved, That in the opinion of the American Medical Association it is expedient that there should be attached to every public hospital for the insane, one or more consulting physicians, whose appointment should be honorary, and who may be consulted at the discretion of the superintendent, such measure being alike for the interest of the hospital, its medical officers, and its patients.

Resolved, That a copy of the above resolutions be transmitted to the Board of Trustees of each of our public hospitals for the insane, and also to the Secretary of the Association of American Superintendents for the Insane, and request that it may be endorsed by that body, the action proposed being upon the respective boards with which its members are officially connected.

Dr. Griscom contended that the Association, by passing these resolutions, would prevent any medical man who should be so appointed from receiving any remuneration. He thought that the physician should be paid for his services, if he chose to make an arrangement to that effect with the managers of the institution; but if he was disposed to accept it as an honorary position, the matter was of course only a personal one. These being his views, he moved that the clause, "whose appointment should be honorary," be stricken out.

Remarks were made endorsing Dr. Griscom, by Drs. Gardner, New York, McCarty, Ill., and others.

The amendment was then carried, after which the resolutions were passed upon as a whole.

The report of the Section was also adopted.

Election of a Permanent Secretary.—Dr. Griscom moved the adoption of a resolution to the following effect:—

Resolved, That the Permanent Secretary shall be entitled to the compensation of dollars per annum, payable out of any surplus funds of the Association after all other claims for each current year shall be paid.

Considerable discussion here followed as to the propriety of adopting the resolution and the amount of remuneration to be offered, when it was finally agreed to lay the matter on the table.

Completion of Report of Committee on Nominations.—The Committee on Nominations then presented the completion of their report, as follows:—

Committee on Exsection and its Connections with Conservative Surgery (enlarged)—Drs. Sayre, N. Y., G. W. Morris, Pa., G. C. Blackman, O., S. H. Tewksbury, Me., E. Andrews, Ill., George B. Twitchell, N. H., J. C. Hughes, Iowa, G. Clymer, U. S. N., J. R. W. Dunbar, Md., R. H. Gilbert, U. S. A.

On Drainage and Sewerage of Large Cities and their influence on Public Health.—Drs. W. J. C. Duhamel, D. C., E. C. Baldwin, Md., Cyrus Ramsay, N. Y.

On Alcohol and its Relations to Man.—Dr. G. E. Morgan.

On Microscopic Observations in Cancer-Cells.—Leonard J. Sandford, Conn.

On Quarantine (continued).

On Medical Ethics.—Drs. J. A. Murphy, Ohio, M. L. Linton, Mo., B. F. Schenck, Pa., Swain Wickersham, Ill., A. J. Fuller, Me.

On the Microscope.—Dr. James M. Corse, Pa.

On Relations which Electricity sustains to the Causes of Disease.—Dr. S. Little, Pa.

On the Morbid and Therapeutic Effects of Mental and Moral Influences.—Dr. A. B. Palmer, Mich.

On the Cause of Extinction of the Aboriginal Races of America—(continued).

On the Causes and Treatment of Un-united Fractures.—Dr. F. H. Hamilton, N. Y.

On Diphtheria.—Dr. Lucius Clark, Ill.

On the Uses and Abuses of Pessaries.—Dr. Jas. B. White, N. Y.

On International Medical Ethics.—Drs. J. Baxter Upham, Mass., R. Thompson, Ohio, G. Shattuck, Mass., G. C. E. Weber, Ohio.

On Climatology and Epidemic Diseases.—Drs. C. W. Parsons, R.I., P. A. Stackpole, N. H., T. M. Logan, Cal., R. C. Hamill, Ill., J. C. Weston, Me., B. H. Catlin, Conn., C. L. Allen, Vt., T. Antisell, Washington, D. C., J. W. H. Baker, Iowa, Abraham Sager, Mich., O. S. Mahon, Md., J. W. Russell, Ohio, D. F. Condie, Pa., H. Townsend, N. Y.

On Autopsies in Relation to Medical Juprisprudence.—Dr. T. C. Finnell, N. Y.

On so-called Spotted Fever.—Dr. J. J. Levick, Pa.

On the Introduction of Disease by Commerce and the Means for its Prevention.—Dr. A. N. Bell, N. Y.

Permanent Secretary American Medical Association.—Dr. Wm. B. Atkinson, of Philadelphia.

Assistant Secretary.—Dr. H. R. Storer, of Boston.

On Patent Rights and Medical Men.—Drs. David Prince, Ill., Thos. Antisell, D. C., and Stephen Smith, N. Y.

The report, after much discussion in relation to the election of the Secretary, was finally adopted.

It was moved that a Committee be appointed to report at the next meeting on the Ligature of the Subclavian Artery. Adopted, and the following gentlemen selected as that Committee :—Drs. Willard Parker, N. Y., Armsby, Albany, Norris, Philad., and Mussey, Cincinnati, O.

Report of Prize Committee.—The prize was awarded to Dr. S. Fleet Speir, for an Essay on the Pathology of Jaundice.

The Association then adjourned until 4, P.M.

Thursday, June 9th.—Afternoon Session.

The Association was duly called to order by the President.

Dr. C. C. Cox submitted the following resolution :—

Resolved, That a Committee of three, consisting of Dr. T. L. Smith, of New York, Dr. Wilson Jewell, of Pennsylvania, and Dr. B. F. Bache, U.S.N., be appointed to memorialize Congress upon the subject of the attempted wrong to the Medical Corps of the Navy, as indicated by a widely circulated protest of the line officers of that branch of the service, against the very moderate increase of rank given to medical officers by a General Order of the Department of the 13th of March, 1863, which increase in rank by no means corresponds in extent to the advancement in rank of the officers of the line thus protesting.

The following resolutions were also offered and adopted:—

By Dr. Raphael, N. Y.

Resolved, To amend the fourth article of the Constitution so as to insert after the word ticket (fifth line) the words, "except in case of the President, who shall be nominated and elected by ballot in open session of the Society, the member receiving a majority of all the votes cast to be declared elected."

Dr. Duhamel, Washington, D. C.:—

Resolved, That the members of the American Medical Association tender their thanks to the gentlemen of the medical profession of the city of New York for the hospitality and civilities extended to them during their stay here.

Resolved, That we also tender our thanks to Mayor Gunther and the gentlemen of the public institutions, who have extended to the members of the Association much kindness and attention.

Dr. McGugin:—

Resolved, That the Committee appointed for the purpose of drafting a suitable bill to be presented to Congress for its consideration and adoption on the subject of the relative rank of medical officers of the army be, and they are hereby instructed to embrace in its provisions a further separation of the Medical Department from the commanding officers of the line, in order to have a more perfect and unrestrained control of its interests and greater efficiency in that branch of the service.

Also by Dr. McGugin:—

Resolved, That each member of the Association is hereby earnestly requested to furnish to the Chairman, or any member of the Standing Committees appointed to report upon the subject assigned them, at the next annual meeting, all facts in his possession, and his experience touching the subject matters upon which said Committee are required to report.

Dr. Palmer, Mich.:—

Resolved, That, as the representatives of the profession of the country, meeting at the moment when the greatest military collision of modern times is at its acme, producing almost unprecedented numbers of wounded and suffering men, calling for the greatest skill and devotion, imposing the deepest responsibilities, the most intense labors, and the most patient and painful endurance on the part of the military surgeons, we cannot separate without a formal and heartfelt recognition of the services of our brethren in the field and hospitals, who have been and are at this moment so nobly responding to all these demands—and while cherishing their immense and invaluable services as an honor to our profession, we commend these men and the memory of their deeds in the cause of *science* and patriotism, of civil government, of Union, of liberty, of humanity, to the gratitude of the country, whose life, as well as that of their heroic patients, they are laboring to preserve.

The Subject of Specialties.—Dr. Homberger, N. Y., offered a resolution for adoption, which had reference to defining the relations which should exist between specialists and general practitioners of medicine, and moved that the Association, in order properly to consider the matter, should resolve itself into a Committee of the whole.

The resolution was favored by Drs. Elsberg and Gardner, N. Y., Storer, of Boston, and others; but was lost, and a motion prevailed to lay it on the table, and have a special Committee of five appointed to report at the next meeting.

The usual resolutions of thanks to the President, Secretary, Committee of Arrangements, and others, were passed without comment.

Concerning Dr. Morton, the alleged Discoverer of Ether.—Dr. Henry D. Noyes, delegate from the New York Eye Infirmary, offered the following resolutions:—

Whereas, There is now pending in Congress an appropriation donating to Dr. W. T. G. Morton, of Boston, the sum of $200,000, for his services in connection with the introduction of sulphuric ether as an anæsthetic agent; and

Whereas, The said Dr. Morton, by suits against charitable medical institutions for infringements of an alleged patent covering not only sulphuric ether, but the state of anæsthesia however produced, has placed himself beyond the pale of an honorable profession and of true laborers in the cause of science and humanity:

Resolved, That the American Medical Association enter their protest against any appropriation to the said Dr. Morton, because of his unworthy conduct, also because of his unwarrantable assumption of a patentable right to anæsthesia; and further, because private beneficence in Boston, New York, Philadelphia, and other places, has already sufficiently rewarded him for any claims which he may justly urge.

Resolved, That a copy of these resolutions be sent to the Chairman of the Committee of Ways and Means in the House of Representatives at Washington.

Dr. Mauran, of R. I., moved the adoption of the resolution, which motion was carried with but two or three dissenting voices.

The reports of the several Sections were, on motion, adopted.

Some unfinished business of minor importance was then disposed of, after which the Association adjourned to meet in Boston the first Tuesday in June, 1865.

During the session, the delegates were hospitably entertained at the residences of Drs. Jos. M. Smith, C. A. Budd, Isaac E. Taylor, Gurdon Buck, Willard Parker, James Anderson, Alonzo Clark, Jared Linsley, and Mayor Gunther.

On Thursday evening, the members visited the house and laboratory of Dr. Squibb, in Brooklyn, and were elegantly entertained. Notwithstanding the inclemency of the weather, a large number were present.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, JUNE 23, 1864.

The New Fee-table —At the annual meeting of the Boston Medical Association, held May 2d, 1864, Drs. J. Mason Warren, George Bartlett, Charles E. Buckingham, George H. Gay, Charles D. Homans and James C. White were appointed a committee to revise the Rules and Regulations and the Fee-table of the Association, and to report upon the same at a special meeting. At the adjourned meeting, held Monday, June 13th, the following report was presented by the Committee and unanimously adopted :—

Report.

In pursuance of their duty, your committee would briefly refer to some of the successive phases through which the Fee-table has passed during the past seventy or eighty years. In 1788, as stated in the letter appended to the Rules and Regulations, the fee for an ordinary visit was four shillings, which in 1800 was raised to one dollar. In 1808 it was again raised to one dollar and a half, with the right reserved to the practitioner to make a discount of one third in cases of necessity. Thirteen years ago it was raised again to two dollars, but in view of the fact that such a fee would be beyond the means of many patients to pay, a sliding scale was adopted, by which it was provided that, in such cases, a minimum fee might be charged of one dollar: it was also further provided that, "in every case, in settling his account, the practitioner might make any deduction which he conscientiously believed that the circumstances of the patient rendered necessary."

It is now thought necessary, in view of the recent great increase in the expenses of living, that the fee be again raised, making it three dollars instead of two, subject as heretofore to any deduction which may be rendered necessary by the pecuniary circumstances of the patient. It has been thought best to substitute a single fixed fee for the visit for the sliding scale adopted in the last Fee-table, for reasons which have been fully discussed at the annual meeting.

For each visit, either medical, surgical or obstetrical, in cases of regular attendance, ... $3.00

For the first visit in a new case, it shall be considered proper to make a charge of from three to five dollars, and a similar charge should be made in cases in which but a single visit is required. In cases also of extraordinary service, detention, or attendance, or when, for any reason, the case is one of unusual importance or responsibility, the charge should be proportionally increased; and the duty to make such increased charge shall be considered obligatory upon the practitioner.

For a visit in consultation, from . . . . . . 5.00 to 10.00

In case of a consultation, the attending physician may also charge the usual consultation fee instead of the fee for an ordinary visit. For each subsequent visit in consultation, where the attendance is continuous, the fee may be from three to five dollars.

For a visit after 9 P.M., and before 8 A.M., from . . . 5.00 to 10.00

In cases of consultation or other extraordinary attendance in the night, the fee for such extra attendance shall be added to that for a night visit.

For attendance involving travel out of town, mileage shall be charged at a rate per mile, for short distances, of from . 1.00 to 2 00

In cases of longer distances, travelled by railroad, the mileage may be reckoned according to the time saved to the practitioner, at from half a dollar to a dollar.

For advice at the physician's house, according to the importance of the case, unseasonableness of the hour, or time occupied, from . . . . 3.00 to 20.00

For a letter of advice, according to the importance of the case, or the time occupied, from . . . . 10.00 to 20.00

For an opinion involving a question of law in which the physician may be subpœnaed, ... 50.00

The above charge shall also be allowed in cases in which the physician is subpœnaed in consequence of an opinion obtained under any other pretext, but which is afterwards sought to be introduced as evidence in a suit or action. Also for attendance in court as an expert.

In case of an opinion involving special study or experimental investigation, such additional service shall be charged in proportion to the time and labor expended.

In case of detention in court as an expert, or in a matter involving a professional opinion, for each day's attendance after the first, the fee shall be fifty dollars.

For a certificate of health,	5.00
For a post-mortem examination in a case of legal investigation,	50.00
For do. made at the request of the family or relations of the deceased,	20.00
For vaccine inoculation,	5.00

It is recommended that in the treatment of gonorrhœa or syphilis, the first charge shall be from five to ten dollars, the subsequent charges to be as in cases of ordinary attendance or advice.

Midwifery.

For attendance during labor in the day time,	20.00
For do. if any part of the attendance is in the night,	30.00

For attendance during tedious labor, it shall be considered obligatory to make such additional charge as, in the discretion of the practitioner, the extraordinary detention or service shall seem to demand.

Obstetric operations, when necessary, shall be charged in addition to the usual fee for attendance.

In obstetrical practice all subsequent visits shall be charged as in ordinary cases of attendance.

In cases of labor when the child is born, but not the placenta, before the arrival of the accoucheur, the whole fee is to be charged. When both the child and placenta are born before the arrival of the accoucheur, half or the whole fee may be charged, according to circumstances. This rule is intended to apply to cases in which the services of the accoucheur have been previously engaged, and in which the delay does not arise from his fault.

If, in any case of labor, a second physician is called in consultation, and subsequently detained in joint attendance, both attending and consulting physicians shall be entitled to the full fee for attendance, and also to such additional amount as may be deemed proper in view of the importance of the case, the unseasonableness of the hour, or any extraordinary detention, or service rendered.

Operative Surgery.

For capital operations, or operations of unusual difficulty, such as amputations of large limbs, ligation of large arteries, operations for stone in the bladder, removal of breasts or of other large tumors, operations for cataract, for strangulated hernia, for vesico-vaginal fistula, for cleft palate, etc., according to the importance of the case and the pecuniary circumstances of the patient.	100.00 to 500.00
For operations of secondary importance or difficulty, such as operations for fistula in ano, for hare-lip, for the radical cure of hydrocele, tapping and injection of ovarian cysts, reduction of dislocations or fractures of large bones, amputation of fingers or toes, tracheotomy, removal of small tumors not involving important organs, passing catheter in cases of obstruction, ligature of arteries of secondary size, etc.,	25.00 to 100.00
For minor operations, such as excision of tonsils, removal of nasal polypi, tapping for hydrocele or for ascites, opening abscesses, catheterism, stitching recent wounds, cupping, passing setons, excision of wens, etc.,	5.00 to 25.00

After surgical operations, all subsequent visits shall be charged as in ordinary cases of attendance.

The provisions of the new table are to take effect after July 1, 1864.

It was also voted to print the Report, together with a list of the members of the Association, in a pamphlet form for distribution.

An Association of American Ophthalmic Surgeons.—In accordance with arrangements previously made, a convention of gentlemen devoted to ophthalmological science and practice was held at the New York Eye Infirmary during the recent meeting of the American Medical Association—Dr. Delafield of New York presiding, and delegates being present from various parts of the United States.

Communications were read by Drs. Dix of Boston and Bumstead of New York, followed by discussion.

A sample of a considerable quantity of the Calabar bean *(Physostigma venenosum)*, imported by Harris & Chapman, of Boston, was exhibited, and remarks as to its therapeutic value and effects were made by several members.

A Constitution and By-Laws, prepared by a committee appointed for that purpose, were adopted, and the assembly constituted itself the American Ophthalmological Association.

The organization was subsequently completed by the election of Dr. Edward Delafield of New York, as President, and Drs. Henry D. Noyes and Herman Althof of New York, as Secretaries.

Dr. Delafield, distinguished as having been for so long a period at the head of the ophthalmic surgeons of our country, in doing the Society the honor of accepting its presidency, expressed his hearty sympathy and concurrence in the objects of the Association, to contribute to the advancement of ophthalmic science by a comparison of experience and interchange of opinions among its members.

It was voted to hold the first Annual Meeting in the city of New York on the second Tuesday of June, 1865.

Between the sessions of the Association the members enjoyed the privilege of examining cases and witnessing operations in the spacious and well-arranged wards of the Infirmary.

In the evening, after the adjournment, by invitation of Dr. Noyes, one of the active members of the Committee of Organization, the members re-assembled at his house; and, after a felicitous welcome from their host, spent some hours in the cultivation of an agreeable personal intimacy. W.

Harvard University. New Professorship.—It will be gratifying to all interested in medical education and the College, to learn that a professorship of the Physiology and Pathology of the Nervous System has been established by the Corporation, and that the greatest teacher in this branch of medicine of the day, Dr. E. Brown-Séquard, has been appointed to fill the Chair. This distinguished physiologist has, we are pleased to say, left London and fixed his residence permanently among us. We doubt not that this addition to the many advantages now offered by the medical faculty of the University, will be duly appreciated by students from all parts of the country in selecting their winter course of lectures.

Massachusetts General Hospital.—The following changes have been made in the medical staff of this Institution. Dr. Bowditch, after a long and honorable term of service, has resigned his position of visiting physician, and Dr. Calvin Ellis, Adjunct Professor of the Theory and Practice of Medicine, has been appointed to fill the vacancy. It will be needless to say how much Dr. Bowditch will be missed, for few of the many who have received clinical instruction from him in their student days will forget the lessons, not only of skill, but of humanity, he taught, and how entirely the patients were made to feel that they could command his heart as well as his experience. Dr. Ellis has been connected with the Hospital for several years as pathologist, and we are glad to announce that the Trustees have advanced him to a place for which he is equally well fitted.

Dr. Brown-Séquard has also been appointed one of the consulting board of the Hospital.

An African Belle.—After a long and amusing conversation with Rumanika in the morning, I called on one of his sisters-in-law, married to an elder brother, who was born before Dagara ascended the throne. She was another of those wonders of obesity, unable to stand, excepting upon all fours. I was desirous to obtain a good view of her, and actually to measure her, and induced her to give me facilities for doing so by offering in return to show her a bit of my naked legs and arms. The bait took as I wished it, and after getting her to sidle and wriggle into the middle of the hut, I did as I promised, and then took her dimensions as follows :—Round the arm, 1 foot 11 inches ; chest, 4 feet 4 inches ; thigh, 2 feet 7 inches ; calf, 1 foot 8 inches ; height, 5 feet 8 inches. All of these are exact except the height, and I believe I could have obtained this more accurately if I could have had her laid on the floor. Not knowing what difficulties I should have to contend with in such a piece of engineering, I tried to get her height by raising her up. This, after infinite exertions on the part of us both, was accomplished, when she sank down again, fainting, for her blood had rushed into her head. Meanwhile, the daughter, a lass of sixteen, sat stark-naked before us, sucking at a milk pot, on which the father kept her at work by holding a rod in his hand ; for, as fattening is the first duty of fashionable female life, it must be duly enforced by the rod if necessary. I got up a bit of flirtation with missy, and induced her to rise and shake hands with me. Her features were lovely, but her body was as round as a ball.—*Speke's Africa.*

In a graceful human step the heel is always raised before the foot is lifted from the ground, as if the foot were a part of a wheel rolling forward ; and the weight of the body, supported by the muscles of the calf of the leg, rests for the time on the fore part of the foot and toes : there is such a bending of the foot in a certain degree. But when strong wooden shoes are used, or any shoe so stiff that it will not yield and allow the bending of the foot, the heel is not raised at all until the whole foot rises with it ; so that the muscles of the calf are scarcely used, and, in consequence, soon dwindle in size and almost disappear. Many of the English farm servants wear heavy, stiff shoes ; and in London it is a striking thing, to see the drivers of country wagons with fine robust persons in the upper part, but with legs that are fleshless spindles, producing a gait which is awkward and unmanly. The brothers of these men, who are otherwise employed, are not so misshapen. What a pity that, for the sake of a trifling saving, fair nature should be thus deformed! An example of this kind is seen in Paris; there, as the streets have few or no side pavements, and the ladies have to walk almost constantly on tiptoe, the great action of the muscles of the calf has given a conformation of the leg and foot to match which the Parisian belles proudly challenge all the world—not aware, probably, that it is a defect in their city to which the peculiarity in their limb is in part owing.—*Scientific American.*

The Indiana State Medical Society met at Indianapolis on the 17th of May, and the annual address was delivered by Dr. Moffat, of Rushville. A paper read by Dr. Rooker, of Castleton, on the prevailing epidemic, "spotted fever," elicited considerable discussion. Dr. S. M. Linton, of Columbus, was elected President; Dr. W. Lockhart, Vice President; Dr. W. M. Harvey, Secretary; Dr. W. P. Parr, Assistant Secretary; Dr. R. N. Todd, Corresponding Secretary; and Dr. J. H. Woodburn, Treasurer. A fine entertainment was given to the State Society, on the evening of the second day, by the Indianapolis Medical Association.

Dr. Theophilus Parvin, recently elected Professor of Materia Medica in the Medical College of Ohio, is to spend some months in Europe the present season—mostly in the city of Edinburgh.

The building heretofore used by the Eclectic Medical College at Worcester, Mass., is to be converted into a U. S. General Hospital for sick and wounded Massachusetts soldiers.

The Report of the Confederate States Surgeon-General, for the months of January, February and March, shows that the number of cases of disease among the Union prisoners in Richmond during that time was 2,779; number of deaths, 1,396. No less than 708 of the deaths were caused by chronic diarrhœa.

Dr. L. Krombein reports, in the *Buffalo Medical and Surgical Journal,* two fatal cases of trichiniasis, which have recently occurred in a town near Buffalo. A specimen of muscle from the persons after death, and of sausages partaken of by them some weeks previously, showed the trichina spiralis in great abundance, and left no doubt of the cause of the disease.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, June 18th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	43	45	88
Ave. mortality of corresponding weeks for ten years, 1853—1863,	34.9	31.5	66.4
Average corrected to increased population - - - - -	00	00	73.09
Death of persons above 90 - - - - - - - -	0	1	1

Deaths in Boston for the week ending Saturday noon, June 18th, 88. Males, 43—Females, 45.—Accident, 3—apoplexy, 3—disease of the bladder, 1—inflammation of the bowels, 2—disease of the brain, 3—bronchitis, 2—burns, 1—carcinoma, 1—cholera infantum, 1—cholera morbus, 1—consumption, 16—convulsions, 2—croup, 2—debility, 1—diarrhœa, 1—diphtheria, 4—dropsy of the brain, 3—drowned, 1—erysipelas, 1—remittent fever, 1—scarlet fever, 1—typhoid fever, 3—gangrene, 1—disease of the heart, 3—malformation of the heart, 1—infantile disease, 4—disease of the liver, 1—inflammation of the lungs, 2—marasmus, 2—measles, 3—old age, 4—paralysis, 2—premature birth, 1—smallpox, 3—spina bifida, 1—syphilis, 1—inflammation of the throat, 1—unknown, 6—wound (gunshot), 1.

Under 5 years of age, 34—between 5 and 20 years, 11—between 20 and 40 years, 22—between 40 and 60 years, 11—above 60 years, 10. Born in the United States, 62—Ireland, 20—other places, 6.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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DIAGNOSTIC IMPORTANCE OF EXAMINATIONS OF THE URINE.

An Address delivered before the Middlesex South District Medical Society, at Waltham, April 20, 1864, by Alfred Hosmer, M.D., of Watertown.

[Concluded from page 415.]

The subject of the second case, a man aged about 40, and a cripple from early life, in consequence, as was alleged, of some indiscretions in connection with scarlet fever, had an attack of hemiplegia Jan. 2d, 1862. The articulation was seriously affected, and the paralysis of the right arm and leg complete. The power of motion was regained by the limbs in a large measure, but the speech always remained imperfect. During the eight months succeeding the original attack, he had, at rather long intervals, four or five fits of an epileptic character, in which he always frothed at the mouth, and sometimes bit his tongue. From these fits he seemed to recover perfectly, and did not appear to suffer any serious or permanent damage therefrom.

Nov. 9th, 1862, I was called to him on account of an attack of severe pain, seated principally at the epigastrium, and radiating from that point to the lumbar region, and unattended by any nausea, vomiting or disturbance of the bowels. In a few hours I found him completely relieved, and was told that he had had a similar, but less severe, attack a short time previously. During the evening of Nov. 13th, he was overtaken by a third attack of abdominal pain, which by many degrees exceeded the first two in violence. Insensibility supervening rather suddenly, I was summoned in the night, and found the patient in a comatose, helpless condition, which terminated in death the following evening. When I saw him November 9th, I was somewhat puzzled, and could not comprehend the condition of things, and as relief was so speedy and so complete, professional attendance was not continued, and I made no farther observations on the case until a few hours before its fatal termination. It then occurred to me that renal disease, if discovered, would remove the obscurity and uncertainty which invested its last phase, viz., the recurring attacks of excruciating epigastric pain, ending at last in profound insensibility and death. The urine last voided by the patient happened to be saved, and I found it to be loaded with albumen. An autopsy was requested, but refused. But I cannot doubt that the man had renal disease and died of it. How long it had existed it is, of course, impossible to say; it may have been for months. By a forced or false interpretation of the symptoms, I could have said that the case was one of apoplexy, and no one would have contradicted the diagnosis. But it was certainly more creditable to our science and our art that the albuminuria should be recognized, and thereby the pathology of the case more perfectly appreciated.

The subject of the third case was a child, to whom I was called on account of œdema of the scrotum. A cathartic was ordered, with the recumbent position, and within twenty-four hours the swelling had entirely disappeared. I directed the mother to send me a specimen of the child's urine, if she observed any return of the trouble. In a few days the urine was forthcoming, and found to be highly albuminous, with a density of 1013°. I inferred from that a subacute affection of the kidneys, which view of the case was confirmed by the subsequent symptoms, among which I would mention as prominent and significant, extreme general anasarca. The child eventually recovered.

I remember the case of a man who sent for me because he did not fully recover from what he considered an attack of cholera morbus. In the course of my visit it was stated that his face had been swollen and eyelids puffed. Taking a hint from this, I tested the urine, and found albumen, which was the key to the case. During the second week, it disappeared from the urine, and the man's recovery was complete.

In another instance, a man was attacked with nausea and epigastric pain and tenderness, with constitutional symptoms of moderate severity. At first I could hardly give a name to his case; but in two days from the time of my first visit he had a fit, in which he was generally convulsed and bit his tongue. This occurrence excited a suspicion of renal trouble, which was confirmed by the albumen which the urine was found to contain.

I know of a case in which a fatal disease was called gastritis. But from a minute and detailed account which I had of the symptoms, I cannot avoid the belief that if the urine had been examined, which it never was, albumen would have been found, and the true character of the case been disclosed.

A few months since I saw a child in consultation, then ill a week or ten days. In the outset it was seized with convulsions, which were rather violent and prolonged. The symptoms that followed, I need not enumerate. Suffice it to say, that at the time of my visit they pointed to the nervous centres. We attempted to secure a portion of the urine for examination, but failed. We agreed that we did not know exactly what the child's disease was, gave a prognosis rather unfavorable, and selected the course of treatment suggested by the more urgent symptoms. Within a few days, general anasarca was developed; and the albumen, then discovered in the urine, proved the kidneys to be the seat of the disease, which up to that time had been, to all intents and purposes, latent. The case terminated favorably at last.

In this connection, I will venture upon a little digression with reference to the possible pathology of convulsions in certain cases. We occasionally see infants and young children who are seized with fits, which are repeated several times in the course of twenty-four hours, and recur in the same way for two or more successive days. They cannot be accounted for by dentition, indigestion, the commencement of an inflammatory affection, or the invasion of an eruptive fever. There are none of the ordinary extra-cerebral causes in operation, still the symptoms do not square exactly with a case of diseased brain. Unable to avoid the influence of prejudices and preconceptions, we are apt to be anxious and apprehensive lest there be within the head some disease, existing or impending. Generally, recovery soon dissipates our fears. It is some time since I asked myself the question, whether in these cases the convulsions might not originate in renal disease, and whether the urine, if it could be examined, would not be found to be albuminous. I throw out a suggestion for your consideration by stating simply an impression; the scanty facts in my possession would hardly warrant the public expression of a positive, unqualified opinion.

But to return: is the significance of albuminous urine absolute and invariable? It is not. In a certain number of cases, albuminous urine, considered relatively to the circumstances and conditions which attend it, indicates or rather proves the existence of renal disease. Although the cases, so called, of albuminuria derive the designation from the condition of the urine, on account of the very close and obvious connection between this condition and the essential disease, we must not allow ourselves to be misled by the term, and forget that the albumen in the urine is only a symptom, though a very significant one. There are many instances in which albumen, in considerable quantity, is found in the urine, as in cases of puerperal convulsions and scarlatinal dropsy, and in which it stands simply as a co-ordinate fact along side of other symptoms, having no more intimate relation with them than that of common causation, and finding its cause and explanation in some alteration in the composition of the blood, and certainly not dependent upon any disease of the kidney. Although in the class of cases just referred to, the known presence of albumen in the urine does not facilitate diagnosis in the same sense and to the same degree as when it is associated with Bright's disease, acute or chronic, still the knowledge of it is important as enabling us to understand more completely than we otherwise should the cases in which it is found, and which it is well always to bear in remembrance, lest we hastily give to the symptoms under consideration an interpretation which subsequent observation may contradict.

Microscopic examination of the urine, by the discovery of casts of the tubuli uriniferi, and epithelial cylinders resulting from rapid and extensive desquamation within the tubuli, furnishes satisfactory evidence, or rather an ocular demonstration, of an existing renal affection. The propriety of such investigation cannot be questioned; but we cannot regard it as absolutely essential to the diagnosis of the diseases of the kidney, as we should the application of chemical tests to the urine. For I am not aware that it will furnish any results which, in the present state of science, could not have been anticipated and expected from less difficult and more available means of observation.

In addition to the reasons already assigned for dwelling thus at length upon the subject of albuminous urine, I will name one more, which is, that albumen in the urine points to the kidneys to the entire exclusion of all other portions of the urinary apparatus; in this respect there is nothing equivocal about it, as with other abnormal urinary ingredients—pus and blood, for instance. Of these it may be briefly said that we can scarcely conceive of the possibility of overlooking them, as they impart to the urine such altered physical qualities as to early arrest the attention of the patient or his attendants; that they belong to a state of things in a high degree abnormal; that they call for a careful and serious consideration of their pathological relations and indications; that although they cannot of and by themselves alone enable us to determine with precision the locality of disease, because they may be associated not only with affections in various portions of the urinary apparatus, but with lesions which are entirely external to it, still they may in a certain number of cases greatly elucidate and facilitate diagnosis, by indicating to a certain extent the kind of disease present. Their origin, however, is often a difficult question, which is to be solved by other symptoms.

The meaning of mucus, when found in the urine in notable proportion, can hardly be ambiguous; its necessary origin from an extensive mucous surface, can point to nothing but the lining membrane of the bladder as being in an abnormal condition.

Saccharine diabetes, though as far as possible from being a renal affection, is attended by a peculiar condition of the urine, glucosuria being the essential and characteristic symptom of this disease. If an average case of diabetes presented itself, a practitioner of fair sagacity and experience could hardly fail to recognize the true character of the morbid action going on, and thence infer the co-existing and consequent glucosuria without submitting the question to actual experiment; yet even in this case a careful examination of the urine is not unnecessary or superfluous; it is demanded by the claims of scientific accuracy and the requirements of rigid, exact diagnosis. Moral certainty lacks very much of being equivalent to experimental proof, and when the latter is available it should most assuredly be resorted to. It is essential, then, in all cases in which the question of glucosuria can arise, to decide it definitely, and in a manner that removes all doubt. But it is no more important to detect the sugar in the urine in cases of genuine diabetes, than it is to prove its non-existence in connection with certain symptoms commonly associated with that disease, for here lies the greater liability to positive error. The use of chemical reagents omitted, I think one would be less likely to misapprehend and miscall a true case of diabetes, than one in which diuresis was a conspicuous symptom. It is certainly not uncommon in practice, apart from cases purely hysterical, to find instances of excessive urination, which have not the least affinity with the disease under consideration. To these may be added the rare, but, if reports are credible, possible examples of polydipsia.* Hence in these cases the necessity of that complete observation which includes a knowledge of the chemical reactions and physical properties of the urine.

Spermatorrhœa is another disease in which a careful examination of the urine, by the microscope of course, is essential to positive, unerring diagnosis. Authorities assert that sometimes the spermatic fluid takes a retrograde course into the bladder, and thence is voided mixed with the urine; and the only sure mode of ascertaining the existence of semen is the detection of spermatozoa by microscopic examination of the fluid. In a contrary sense, this examination is required to enable us to fully relieve the fears and apprehensions of certain patients, such as have consulted me from time to time, always young men, who have discovered that a portion of their urine is milky, even some of it almost semi-solid, from the abundance of colorless urate of ammonia or phosphate of lime present, and who are speedily convinced that there is a constant and involuntary emission of seminal fluid, and thence forbode results the most diastrous.

The absolute quantity of urine voided by a patient may sometimes furnish indications of great importance to diagnosis—for instance, when it is a question between a serious organic cerebral lesion, and hysteria. I shall take the liberty of illustrating this by adducing a case related to me by a prominent member of this Society. Without specifying symptoms, it is sufficient to state that they were unequivocally referable to the nervous system. By one physician, whose ability and sagacity we all admire, the case was at first pronounced hysteria without any hesitation; but the gentleman whom I quote took a different view of the case, and, as the result showed, correctly diagnosticated something more serious than hysteria. He told me that in making up his mind, he was largely influenced by the fact that he was satisfied that the urine, although its amount was determined with some inconvenience and difficulty, because it was passed involuntarily, not only was not in hysterical excess, but on the contrary was rather scanty.

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* Vide Boston Medical and Surgical Journal, vol. xlix., No. 20, p. 393.

It may not be amiss to make a passing allusion to certain essential ingredients of the urine, organic and saline compounds having definite chemical compositions and relations, of which some are always held in perfect solution, some always exist as a visible, appreciable deposit or sediment, while others are sometimes dissolved, sometimes precipitated, according to certain variable conditions. In this class are included urea, uric acid and its salts, the combinations of chlorine, and the phosphates; this enumeration, though not complete, being exact enough for ordinary practical purposes. The significance of an unusual proportion of any of these substances in the urine, we all understand perfectly well. In a general sense it cannot be said that any one of them results from a morbid condition that can only through and by itself be indicated and recognized with absolute certainty, as in albuminuria and glucosuria. Commonly, then, these elements, in their deviations from the natural standard, possess no especial diagnostic value. Yet, sometimes, to be aware of these deviations is probably to comprehend more fully and more exactly certain general pathological conditions. It is scarcely necessary to cite instances in illustration. In connection with this part of our subject, some of you may have seen it stated recently in print,* that complete absence of the chlorides from the urine is a "pathognomonic diagnostic sign of typhoid fever," as distinguished from other varieties of fever. It cannot be pathognomonic, for the same condition obtains in pneumonia, during the stage of hepatization,† and also, if I mistake not, in typhus fever. We should indeed be fortunate to discover so simple a method of settling a question often difficult, and distinguishing with certainty between typhoid fever and cerebral disease on the one hand, and on the other that form of simple continued fever which we annually see, and which almost seems to be taking the place of the typhoid affection. As to the value of this asserted diagnostic sign, I can affirm nothing, but should be inclined to think it was a premature conclusion drawn from insufficient premises.

The reaction of the urine, as acid or alkaline, is of little or no importance in connection with our present subject. The density of the urine, of itself alone, can furnish no conclusive, final diagnostic indications. When considered in connection with the element of quantity, it may suggest certain possibilities or probabilities to be tested by farther examination. Without styling it a superfluity, we will only say that in most cases we can save ourselves the trouble of observing it, and make a sure diagnosis without it.

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* Boston Medical and Surgical Journal, vol. lxix., No. 19, p. 378.
† Todd. Acute Diseases. Ed. 1860, p. 253.

The examinations of the urine which we advocate and urge in the observation of disease, are of extreme simplicity, and made with remarkable facility, being for the most part simply qualitative. Though the whole chemistry of this secretion, in health and disease, may not be among the attainments of any of us, on account of its somewhat complicated and intricate nature, it is a fortunate fact that the knowledge necessary for the purposes of clinical observation is inconsiderable in amount, simple in its character, and most easily acquired.

There is a most satisfactory certainty about the results of these examinations: they return to our interrogations a most unmistakable yes or no, that cannot be misapprehended. In the ordinary examinations of the thorax, percussion may give a sound that is doubtfully, but not certainly, dull; by auscultation we may hear a sound we suspect, without knowing surely, to be morbid. Then, again, skill in this particular department of observation, to say nothing of a special natural aptitude, comes of a large practice and a long experience. On the other hand, the veriest tyro in medical chemistry can see and say truly whether or not heat and nitric acid produce an albuminous precipitate in urine; whether or not the peculiar and characteristic color of the suboxide of copper appears, when a certain combination of reagents is applied. Still more in recommendation of these examinations, it may be said, that while their positive results have an unquestionable significance. their negative results have sometimes an absolute value, at others something very nearly approaching it. The absence of sugar from the urine proves the non-existence of diabetes; the absence of albumen makes it in the highest degree probable that there is no structural disease of the kidneys.

It may, then, be considered an imperative duty to examine the urine in all doubtful cases, and in all cases in which a satisfactory diagnosis cannot be made out without it. If the result be negative, as it often will, we have only to remember that diagnosis by exclusion is not a new expression, and that it is no less important to know the negatives than to comprehend the positive of a case.

In conclusion, in setting forth, even thus imperfectly, the necessity of examinations of the urine, I am only urging the claims of a most important subject of which this forms a part. No simple pathological theory is tenable which asserts the unity of disease. We are bound to discriminate and make due distinctions between its various similar and dissimilar forms, and to deliberately determine the nosological position and relations of each case. In the interpretation of symptoms, we should not suffer ourselves to adopt those unmeaning and insignificant phrases, of ancient origin, which tradition has repeated to each generation, and handed down to be used by the unlucky victims of mental indolence and lack of scientific curiosity; but we should always strive to insist upon a reasonable and philosophical exposition of causes. And as a means to the attainment of this end, we must with the strictest fidelity discharge the physician's primary duty of vigilant, scrutinizing, intelligent observation.

INFLUENCE OF PHYSICAL AND CHEMICAL AGENTS UPON BLOOD; WITH SPECIAL REFERENCE TO THE MUTUAL ACTION OF THE BLOOD AND THE RESPIRATORY GASES.

By George Harley, M.D., Professor of Medical Jurisprudence in University College, Lond. Communicated by Dr. Sharpey, Sec. Royal Society.

(Abstract.)

This communication is divided into two parts. The first is devoted to the investigation of the influence of certain physical agencies, viz., simple diffusion, motion, and temperature, and of the conditions of time and the age of the blood itself. The second part includes the consideration of the influence of chemical agents, especially such as are usually regarded as powerful poisons.

The paper commences with a description of the apparatus employed, and the method followed in conducting the inquiry; and the details of the several experiments are then given. The following is a brief statement of the results.

Part I.

1. The experiments on diffusion showed that venous blood not only yields a much greater amount of carbonic acid than arterial blood, but also absorbs and combines with a larger proportion of oxygen.

2. Motion of the blood was found to increase the chemical changes arising from the mutual action of the blood and the respiratory gases.

3. The results of the experiment on the influence of time led to the conclusion that the blood and air act reciprocally on each other in the same way out of the body as they do within it, and that their action is not instantaneous, but gradual.

4. It was ascertained that a certain degree of heat was absolutely essential to the chemical transformations and decompositions upon which the interchange of the respiratory gases depends. The higher the temperature up to that of 38° C. (the animal heat), the more rapid and more effectual were the respiratory changes; whereas a temperature of 0° C. was found totally to arrest them.

5. The influence of age on the blood was found to be very marked, especially on its relation to oxygen. The older and the more putrid the blood becomes, the greater is the amount of oxygen that disappears from the air; and although at the same time the exhalation

of carbonic acid progressively increases with the age of the blood, yet its proportion is exceedingly small when compared with the large amount of oxygen absorbed.

6. The average amount of urea in fresh sheep's blood was ascertained to be 0·559 per cent., and its disappearance from the blood during the putrefactive process was very gradual, there being as much as 0·387 per cent. in blood after it was 304 hours old.

PART II.

The chemical agents employed were animal and vegetable products and mineral substances.

1. The effect of snake-poison was found to be an acceleration of the transformations and decompositions occurring in blood, upon which the absorption of oxygen and the exhalation of carbonic acid depend.

2. The presence of an abnormal amount of uric acid in blood was also found to hasten the chemical changes upon which the absorption of oxygen and the exhalation of carbonic acid depend.

3. Animal sugar, contrary to what had been anticipated, retarded the respiratory changes produced in atmospheric air by blood.

4. The influence of hydrocyanic acid was studied both upon ox-blood and human blood, and found to be the same in each case, namely, to arrest respiratory changes.

5. Nicotine was also found to diminish the power of the blood either to take up oxygen or give off carbonic acid gas and thereby become fitted for the purposes of nutrition.

6. The effect of woorara poison, both on the .blood in the body and out of it, was ascertained to be in some respects similar to that of snake-poison, namely, to increase the chemical decompositions and transformations upon which the exhalation of carbonic acid depends; but differed in retarding, instead of hastening, the oxidation of the constituents of the blood.

7. Antiar poison and aconite were found to act alike, inasmuch as both of them hastened oxidation and retarded the changes upon which the exhalation of carbonic acid depends; in both respects offering a striking contrast to woorara poison, which, as has just been said, diminishes oxidation and increases the exhalation of carbonic acid.

8. The effect of strychnine on the blood, both in and out of the body, was studied, and found to be in both cases identical, namely, like some of the other substances previously mentioned, to arrest respiratory changes. Moreover, in one experiment in which the air expired from the lungs of an animal dying from the effects of the poison was examined, it was ascertained that the arrest in the interchange of the gases took place before the animal was dead.

9. Brucine acts in a similar manner as strychnine, but in a much less marked degree.

10. Quinine also possesses the power of retarding oxidation of the blood, as well as the elimination of carbonic acid gas.

11. Morphine has a more powerful effect in diminishing the exhalation of carbonic acid gas, as well as the chemical changes upon which the absorption of oxygen by blood depends.

Under this head the effects of anæsthetics upon blood are next detailed; and in the first place, the visible effects of chloroform upon blood are thus described:—If 5 or more per cent. of chloroform be added to blood, and the mixture be agitated with air, it rapidly assumes a brilliant scarlet hue, which is much brighter than the normal arterial tint, and is, besides, much more permanent. When the mixture is left in repose, it gradually solidifies into a red-paint-like mass, which, when examined under the microscope, is frequently found to contain numerous prismatic crystals of an organic nature. If the blood of an animal poisoned from the inhalation of chloroform be employed in this experiment, the paint-like mass will be found to be composed in greater part of the crystals just spoken of; the crystals in this case being both larger and finer than when healthy blood is employed. Chloroform only partially destroys the blood-corpuscles. Its chemical action is to diminish the power of the constituents of the blood to mix with oxygen and give off carbonic acid.

The action of sulphuric ether upon blood differs in many respects from that of chloroform. In the first place, ether has a powerful effect in destroying the blood-corpuscles, dissolving the cell-walls and setting the contents free. In the second place, ether prevents the blood from assuming an arterial tint when agitated with air. The higher the percentage of the agent, the more marked the effect. In the third place, ether neither diminishes the absorption of oxygen nor the exhalation of carbonic acid by blood; and lastly, it has a much more powerful effect in causing the constituents of the blood to crystallize. For example, if an equal part of ether be added to the blood of a dog poisoned by the inhalation of chloroform, as the ether evaporates groups of large needle-shaped crystals are formed. Under the microscope, the crystals are found to be of a red color and prismatic shape.

Alcohol acts upon blood somewhat like chloroform; it arrests the chemical changes, but in a less marked degree.

Amylene was found to act like ether upon blood, in so far as it did not diminish the absorption of oxygen or retard the elimination of carbonic acid. It differed, however, from ether in not destroying the blood-corpuscles.

In the last place, the action of mineral substances is stated, viz.:—

1. Corrosive sublimate was found to increase the chemical changes which develope carbonic acid, and to have scarcely any effect on those depending upon oxidation; its influence, if any, is rather to diminish them than otherwise.

2. Arsenic seems to retard both the oxidation of the constituents of the blood and the exhalation of carbonic acid.

3. Tartrate of antimony increases the exhalation of carbonic acid gas, while at the same time it diminishes the absorption of oxygen.

4. Sulphate of zinc and sulphate of copper both act like tartrate of antimony, but not nearly so powerfully.

Lastly, phosphoric acid was found to have the effect of increasing the chemical transformations and decompositions upon which the exhalation of carbonic acid depends.—*Proceedings of the Royal Society*, March 10th, 1864.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

April 11th.—*Movable Kidney.*—Dr. Abbot said he had been consulted by a lady from a distant part of the State on account of a tumor of doubtful character which had given her much anxiety, and for which she had been subjected to various medical treatment for the past two years. The tumor was situated in the abdominal cavity, and easily slipped away from under the hand on pressure. On examination, it presented all the characters of movable kidney. While the patient was recumbent on the back, it could be obscurely felt just beneath the liver and in close contact with it. The patient herself said it could not be felt in this position, but it was distinctly made out. When the patient turned on her left side, it fell down from this position and could be very readily grasped through the abdominal parietes. When allowed to take its own place, it came to the median line, and could be very distinctly felt resting in front of the bodies of the vertebræ. It was an oval body, of the size of a normal kidney. The patient could not say that it had given her any special suffering other than the anxiety which it had caused from the first, and some obscure uneasiness and sense of weight at times. The tumor had been regarded by a respectable physician as connected with the liver, and she had taken medicine from him to "backen" it. Indeed, she had been under treatment more or less since it was first discovered, and she had consulted several medical gentlemen about it. Of course, the diagnosis and the advice to do nothing gave her great relief. In another case, which had been under Dr. Abbot's notice for several years, the same relief followed the diagnosis and the same advice. In the latter case the patient complained much of a sinking sensation and a dull pain in the tumor. It had been a cause of constant and great anxiety from the time of its discovery. Since learning its probable nature she had ceased to worry about it, and had experienced very little annoyance from it. After great fatigue from work or long standing or walking, there was some feeling of dragging or pressure downwards in the neighborhood of the tumor, but nothing more. It seems probable that the constant dwelling of the mind upon it at first had led to the development of an unusual sensitiveness in the part.

In this case, as in the one first mentioned, the tumor was discovered by the patient herself while in bed, and at once excited great alarm. Both of the patients were females who had borne children, and in both the tumor was on the right side. Dr. Abbot said he had seen at least six of these cases in his own and other gentlemen's practice, and, so far as he could recollect, all of them were females and in all the movable kidney was on the right side. In one instance it could be pushed down nearly into the cavity of the pelvis, and could be easily made to ride up in front of and nearly across the spinal column. These cases are mainly important as a matter of diagnosis, and in this respect they are *very* important; as, when misunderstood, as in the first instance reported, they give rise to much needless anxiety and unnecessary treatment.

MAY 23d.—*Case of Rabies.*—Dr. TOWNSEND said he had seen a case of rabies, in consultation with Dr. Faulkner, of Jamaica Plain, and read the following description of it, which was sent to him by Dr. F.

"A. C. H., a vigorous boy of 5½ years, son of a farmer in Brookline, was bitten by a Newfoundland dog, April 6th, 1864. There was a deep wound, two inches long, in the right cheek, a deep punctured wound in the left cheek, and both lids of the left eye were badly lacerated. Caustic was not applied, for it seemed inexpedient to use it for such wounds. The wounds healed in due time, after free suppuration. The boy was as well as usual till thirty days after the bite.

"Friday, May 6th, was very hot for the season. The boy had been at school in the morning, and was at play through the day. At supper he ate very hearty, drank milk freely, and became so sleepy at the table that he could hardly get to bed. He fell asleep; but, in a short time, waked with crying and restlessness, and could not tell what he wanted. This state continued, and he slept no more that night. By midnight, some 'twitchings' were observed. At daylight, spasms appeared on his attempting to drink, which he did in a very agitated way.

"At 9 o'clock, A.M., I found him dressed, sitting in his mother's lap, in the parlor. I passed nearly an hour with him. His pulse was very quick, and occasionally there was twitching of one forefinger, but otherwise he seemed much as usual at my former visits. Nothing was offered him, as he was then very quiet. He slept some hours in the forenoon, and was very silent all the day. He slept that night (Saturday) till midnight, but then became very restless and never slept afterwards.

"At 5, A.M., Sunday, he had a most violent spasm, convulsing his whole body, and beginning by the seizing of his throat with both his hands. Immediately after this, he complained of extreme cold. He said his breath was cold, and everything was cold. He could not let his mother come near him, 'her breath was so cold.' A fire-board was removed for ventilation, but he jumped off the bed to replace it, saying the cold of the chimney would kill him. He was reticent, and had a peculiarly sad and suspicious look. But this sense of cold was gone in six or eight hours, and did not recur.

"His silence, too, disappeared about the same time, and he talked incessantly as long as he lived. His language and his ideas were now very unusual, and much beyond his years. His saliva was disordered and viscid, and at times a whitish mass of it could be seen upon the tongue. In speaking, the movements of the mouth were agitated and spasmodic. He died, conscious, at 3 o'clock, A.M., Monday, about 54 hours after the ushering in of the disease.

"During the last day, he endured all kinds of tortures—he was burning up in the fire, he was drowning in the river, and the like. During this period he wanted drink very much, and was able, by using a teaspoon, to get down considerable; but each attempt to take it produced a convulsive action of the throat, and frequently of the whole frame, so that not more than one teaspoonful in four was really swallowed. He took some food, and, but three hours before his death, eat milk toast. He at no time exhibited any peculiar dread of water. The large cicatrix on the cheek looked redder than it had done, but no other change was seen in the wounds.

"The treatment consisted in a cathartic (senna), which had effect; morphine, freely, which seemed to lessen the tendency to spasm, and veratrine ointment to the spine. Chloroform was early tried, but availed nothing. Whiskey was given, and it was thought with some benefit.

"Dr. S. D. Townsend saw the patient in consultation, and also Dr. Windship.

"Of the condition and fate of the dog, nothing is known with certainty."

Dr. Townsend remarked that, of the three cases on the records of the Massachusetts General Hospital, the first, a female aged 7 years, bitten one month before the attack, lived two days; the second, a male aged 31, bitten five months before, lived four days; the third, a male aged 3½ years, bitten thirty-seven days previous to attack, lived six days.

Bibliographical Notices.

The Pathology and Treatment of Venereal Diseases: including the Results of Recent Investigations upon the Subject. By FREEMAN J. BUMSTEAD, M.D., Lecturer on Venereal Diseases at the College of Physicians and Surgeons, New York; late Surgeon to St. Luke's Hospital; Surgeon to the New York Eye and Ear Infirmary. A new and revised Edition. With Illustrations. Philadelphia: Blanchard and Lea. 1864.

IN no department of medicine has there ever been such an entire revolution as during the last few years in the opinions entertained in relation to syphilis, or one which has so little attracted a proper degree of attention among physicians in this country. We do not allude to the change of views as to the transmissibility of the so-called secondary forms, or the possibility of conveying the disease by the blood of the infected person in the process of vaccination, for these are facts which have been demonstrated here as well as elsewhere, but to the results of modern investigations made by European authorities, whose names even are not generally familiar to the profession in America. Three years ago Dr. Bumstead published the first edition of his work on venereal diseases, which embodied the results of these investigations ; but although it was acknowledged at once and everywhere to be a masterly treatise, it failed to produce that universal change in the opinions of the profession which might have been expected. This was owing to no fault in the book, however, but to the fact that it was not enough read by physicians. It is on this account that the old terms "hard," "soft" and "infecting" chancre are still almost universally employed by the profession, and that patients are unnecessarily submitted to a course of constitutional treatment because practitioners have not yet learned to distinguish between a simple local disease and syphilis. We trust that the present edition will be read by physicians as well as students, and the following extract from the Preface will show how much there is for them to *unlearn* as well as to learn.

"The most noticeable change in the present edition will be found in the division of the work. From a certain deference to the opinions at that time generally received, the chancroid and its complications were, in the first edition, discussed in connection with syphilis. They have now been assigned, as is their due, to separate portions of the work. This change has necessitated a complete reconstruction of the second part of the first edition, and its division into two—a change which, it is hoped, will impress still more strongly upon the mind of the student the distinct nature of the two diseases referred to. The same object has been had in view in abandoning the terms 'soft,' 'hard,' 'simple,' and 'infecting chancre,' and in applying, in accordance with logical accuracy, the term *chancre* exclusively to the initial lesion of syphilis, and that of *chancroid* to the contagious ulcer of the genitals. The practical portion of the work has also undergone important alterations on various topics, among which may be mentioned the treatment of stricture by the 'immediate plan' of Mr. Holt; the abandonment of specific remedies in most cases of the initial lesion of syphilis; the preference given to the external rather than the internal use of mercury in secondary and tertiary syphilis; and the necessity of trusting to nature, aided by hygienic influences, and not to treatment indefinitely prolonged after the disappearance of all syphilitic manifestations, to eliminate the virus from the system. Numerous emendations and additions of a minor character have been made; every portion of the work has been carefully revised; a number of chapters have been re-written; several new illustrations have been added; and no effort has been spared to render the present edition a complete treatise upon the subject of Venereal, thoroughly on a level with the most advanced state of our knowledge."

Dr. Bumstead has fully succeeded in his undertaking, and we know of no treatise in any language which is its equal in point of completeness and practical simplicity. We wish, however, that the author had cast himself entirely loose from the prejudices which have led him to connect the term "chancre" with syphilis, for we believe that far less confusion would arise were its meaning restricted to the local ulcer alone in place of the word "chancroid," inasmuch as the initial lesion of syphilis in no way corresponds to the usual acceptation of the former. It is merely a matter of words, however, for the author's views entirely coincide with those of the modern German school, which separates chancre as completely from syphilis as gonorrhœa.

We cannot refrain from re producing, in this connection, the concise exposition of these views by Prof. Zeissl, of Vienna, which we published at length two years ago, and which we trust will prompt our readers to recognize the importance of learning more of this and other matters, which Dr. Bumstead has treated in so interesting and thorough a manner.

"From what has been stated, then, it may be seen that we do not recognize a double chancre virus, nor, accordingly, two chancre ulcers essentially distinct from each other. We know only chancres with greater or less capability of destruction, and with smaller or larger amount of diphtheritic exudation. All chancres produce one and the same virus. The pus of a chancre causes local disturbances only, and when re-absorbed merely excites in the nearest lying lymph-glands an inflammatory or suppurative process. Constitutional syphilis, however, is never produced by the absorption of pus from a chancre, unless at the same time syphilitic blood or some syphilitic secretion is mixed with it.

"We recognize, farther, no hard chancre, but only syphilitic indurations of the tissues upon which chancres are accustomed to be seated. Where this combination does not take place, the base and surrounding portion of a chancre remain always soft, and can at most, after long standing, undergo a *similar* sclerosis in their vicinity to that which we are accustomed to find in other ulcers, those, namely, of a scrofulous and varicose nature upon the feet, but never that peculiar cartilaginous hardness, such as occurs in the specific Hunterian induration of the tissues.

"A Hunterian induration, bearing upon its surface a chancre, is the result of a double infection, or of the reception of two poisons—the chancre virus and the syphilitic virus; both of which poisons may, as is most frequently the case, be taken up simultaneously at the same coitus, or one after the other. Both go on generating themselves in their own way; chancre poison reproduces chancre poison, and syphilitic contagion engenders, in turn, a blood impregnated with syphilitic contagion.

"We recognize, accordingly, no chancre syphilis, no primary and secondary syphilis. The Hunterian induration may, perhaps, be looked upon as the first development of syphilis, but not, however, in the sense of the earlier teachers as a primary symptom, the virus of which is by absorption converted into the so-called secondary syphilitic virus.

"All questions and observations which have been raised concerning the inoculability of the so-called hard chancre are to us of easy answer, for as there is no hard chancre, inoculation from the same is out of the question. That which is taken from a so-called hard chancre is always the secretion of a chancre situated upon a borrowed, indurated base, and is just as inoculable as the secretion of the same ulcers seated upon normal tissue.

"If we have the induration alone, then, in case it suppurates, its purulent secretion or blood, if transferred to another non-syphilitic person, will certainly reproduce induration and syphilis, whereas upon the possessor of the induration, or upon another already affected with syphilis, inoculation is without effect. If, however, we inoculate a healthy individual, susceptible to both contagions, with matter from a chancre seated upon an induration, we can produce upon him two diseases by a single insertion—viz., chancre and syphilitic induration: while upon an already syphilitic person the effect of the chancre poison only is developed, so that from the same source we cause to exist upon the former a so-called hard chancre (Clerc), and upon the latter, the syphilitic, simply a soft ulcer.

"We can accordingly speak of chancre syphilis only when we mean to express that syphilitic virus is mingled with the chancre virus, and in this sense it follows that we are obliged to speak also of a gonorrhœa syphilis, because syphilis can in the same way mingle itself with gonorrhœal secretion and form in the urethra a point of infection. Since this, however, would lead to endless confusion, it is necessary to entirely separate chancre as well as gonorrhœa from syphilis. Chancre as well as gonorrhœa may occur upon the same person in juxtaposition with syphilis, and in this way indeed be the mediate cause of syphilis. Chancre and gonorrhœa contagion can occasion syphilis only in the same way as vaccination, which is an entirely heterogeneous matter, produces syphilis, when the vaccine lymph is mingled with syphilitic blood.

"If, then, we divide venereal diseases into groups, we have three, viz.:—1. Gonorrhœa. 2. Chancre. 3. Syphilis.

"All three of these groups of disease arise from contagions, which are essentially different from each other. The gonorrhœal and chancre contagions display their activity in a few hours or days, whereas the syphilitic poison exhibits its first perceptible manifestation only after three or four weeks; that is, it has a period of incubation, or latency, analogous to the poison of rabies canina.

"The first local morbid alterations which are produced by syphilitic infection always show themselves at the point where the virus has entered, and, in case the imbibition has taken place without the intermixture of chancre poison, there arises, at the end of three or four weeks, upon the infected spot, a smaller or larger nodule, which gradually exfoliates and runs the course already described. The well-known indolent swelling of the glands, which accompanies the Hunterian induration, appears generally in the sixth week after infection."

The Ophthalmic Review: a Quarterly Journal of Ophthalmic Surgery and Science. Edited by J. Zachariah Laurence, of London, and Thomas Windsor, of Manchester No. I., April, 1864. London.

Some idea of the plan of this Journal may be derived from the following selections from the editors' Introduction.

"* * * There is no English journal, however, which displays to the surgeon a complete account of what is going on at home and abroad in this important and interesting branch of surgery. The 'Royal London Ophthalmic Hospital Reports' (which are no longer issued regularly, but only from 'time to time'), most valuable in themselves, will on reference be found to have a different scope from our Review, which is quite as much intended for the Profession at large as it is for Ophthalmic Surgeons, and which has taken for its model the well-known 'Annales d'Oculistique,' and the more recent 'Monatsblätter' of Zehender."

"One of the principal features of the Review will consist in the reproduction of the more important contributions to ophthalmology which appear from time to time on the continent."

The number before us commences with an interesting article by Zehender, recommending the use of cataract knives with a convex cutting edge, on the ground that the last part of the corneal section is accomplished more easily with such knives. Then follows a paper by Thomas Windsor, on "Iridectomy as a Method of forming an Artificial Pupil." This is a detailed account of the operation, and of great practical importance, as the second of the following passages, interesting in itself, and for the comparative novelty of the view expressed, will exemplify: (p. 24) "By far the most serious and difficult to treat are the cases of genuine universal posterior synechia, in which the whole of the posterior surface of the iris is adherent, and the posterior chamber obliterated." (p. 26.) "Professor von Graefe has recently shown that it is advisable in these cases to first remove the lens even though transparent, for then the iris may be attacked with far greater boldness and success than in the ordinary method. He became convinced by the examination of pathological specimens, that in many cases it is quite impossible to form an artificial pupil without injury to the lens, owing to the extent of the adhesions and the fragility of the anterior capsule."

Other interesting papers are the one on Retinitis Pigmentosa, by Mooven, and a review of English ophthalmoscopic literature, in which some of the English writers are referred to in terms by no means complimentary.

Judging from this first number, we look forward with pleasure to the next, and anticipate that the Ophthalmic Review will be well worth the attention of medical men. H.

A Treatise on Human Physiology: designed for the use of Students and Practitioners of Medicine. By John C. Dalton, Jr., M.D. Third Edition, Revised and Enlarged—with 273 Illustrations. Philadelphia: Blanchard & Lea, 1864.

In calling attention to the recent publication of the third edition of this book, it will only be necessary to say that it retains all the merits and essentially the same plan of the two former editions, with which every American student of medicine is undoubtedly familiar. The distinguished author has added to the text all the important discoveries in experimental physiology and embryology which have appeared during the last three years, a large portion of which period he has given to the cause of his country as well as to the cultivation of science.

It is highly gratifying to reflect that two books so creditable to American medical literature as this and that we have above noticed, should have been written by physicians born and educated in Massachusetts.

Dr. Henry, in the *Cincinnati Lancet and Observer*, states that, in his hands, fraxinus nigra, or swamp ash, never fails to arrest the paroxysms of intermittents, and believes that it may be substituted for quinia in all simple and complicated cases.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, JUNE 30, 1864.

RESPONSIBILITY OF PHYSICIANS IN CASES OF A CONFIDENTIAL NATURE.—The responsibility resting with physicians in cases involving the moral character of the patient is one which, we think, has not been felt so fully by the profession here in times past as it might have been, or as the deterioration of public morals in our large cities of late years has given occasion for. Placed at the very heart of the people's confidence, no man holds a greater power of injury to the reputation of many a man who walks the streets with a fair outside, than he whose profession has made him acquainted with the physical consequences of his delinquencies. This sacred confidence has generally been recognized as one which should be inviolate, and in some communities has even been protected by the public law itself, as a veil through which the all-searching glance of public justice might not penetrate. The perilous nature of the secrets thus hid from all the world, and the question of the duties growing out of it, have of late excited no little discussion in the medical journals, especially those on the other side of the water; and no little difficulty seems to have been found in coming to a conclusion which should save the physician on the one side from a breach of confidence, and on the other from withholding what it is of the utmost importance to the happiness of innocent persons should be known. Practically, we are not aware that heretofore such questions have assumed importance in our community; but one or two instances which have come to our knowledge of late, make it worth while for us to give them a serious consideration, for the purpose of adopting a definite rule of action.

One of the cases referred to is known to many of our readers as that of an eminent physician in this State, who has been subjected to the most unrelenting persecution, so far as the personal influence of one man can effect this, merely because he is suspected of having given an opinion unfavorable to his character, when questioned by another, who felt he had a right to know, or at least to attempt to discover, whether there was any stain upon it. Abandoning a suit in court when he found the victim of his hostility was prepared to meet him there, he has resorted to a *guerilla* warfare, so to speak, and not long since addressed a letter, setting forth grave charges against him, to a body of physicians of which he was a member, calculated to injure him greatly in their estimation. This led to an explanation on the part of the gentleman thus assailed, and an entire acquittal in the minds of those addressed, of any unprofessional or dishonorable conduct. But who can be prepared at all points against the covert attacks of such a foe? Who can unmask the falsity of private malice when it poisons in secret the reputation of a man whom it cannot injure in public?

The second instance was that of a physician, also well known to many of our readers, who not long since was called upon by two individuals calling themselves gentlemen, and asked to divulge the nature of the malady for which he was treating a young man in their employ. The physician made certain statements with regard to the case which did not seem satisfactory to his visitors, and they proceeded to say that they felt they had a right to know all the facts in the case, and they had therefore examined his recipes left in the hands of the druggist who had put them up; that they were clearly of such a nature as to cast suspicion on the person for whom they were prescribed, and not such as would be likely to be used under the circumstances described by him. The meanness of such a procedure was happily met in this instance in the only way in which it should have been met, and the intruders upon a gentleman's premises were speedily shown out of the door which their own conduct had so clearly demonstrated their unfitness to enter.

Such experiences may happen to all of us, and it is therefore well to be prepared with some definite rule of action for the occasion, whenever it may arise. The position is one of no little difficulty and embarrassment. On the one hand the proper reticence of the physician, who does not choose to be challenged so peremptorily by an unauthorized person to give information which no one has a right to demand of him, will probably be construed unfavorably to the party about whom the inquiry is made, and thus an entirely innocent person may, under the maxim that "silence gives consent," be subjected to the most undeserved suspicion. On the other hand, if physicians are complaisant enough to gratify the curiosity of the inquirer in cases where there is no just ground for suspicion, and explain all the circumstances to his satisfaction, what becomes of the cases where there *is* just ground for suspicion? Surely it cannot be claimed that we are bound, under any circumstances short of legal compulsion, to reveal what may blast the prospects of our confiding patient for life, to say nothing of the loss of professional honor which such a breach of confidence implies. Neither can it be expected that a physician will positively falsify and deceive the inquirer, to cover up what he feels bound to keep secret. What are we to do in such cases?

We should have some fixed rule of action, and it would be better if such a rule could be adopted by the profession as a body, so that each member of it may refer to it in an emergency, as a guide which he is pledged to follow. Let our local Association, for instance, vote as a body, that they will not, under any circumstances, impart information, when appealed to in private, concerning *any* patient, in answer to an inquiry which implies suspicion of the moral character of such patient, and we think the end will be answered. The printed rule can be shown to the inquirer; and although an opportunity to clear the character of an innocent person may occasionally, from the very necessity of the case, be thus lost, yet we think the good resulting will, in the long run, more than counterbalance the hardship of such instances. Physicians will be prepared with a ready answer on all such occasions, and will thus escape the danger to which a want of presence of mind, or an unguarded statement, may expose them; while the perilous secrets of the community, which sad necessity opens to the unwilling confidence of members of our profession, will find only in them the kindly sympathy and advice, or the healing hand, which can do so much to alleviate the misfortunes or remove the consequences of errors, which their experience of human frailty teaches them to look upon with a charity too often denied by the world at large.

During the year 1863, there were admitted into the Insane Department of the Philadelphia Almshouse, 148 men, and 210 women, 358 in all; which added to those remaining in the Hospital, January 1, 1863—viz., 192 men and 339 women—531, gives a total of 889 who were under treatment during the year, of whom 340 were men and 549 were women. The discharges during the same period were 157 men and 198 women, being a total of 355. Of these, 58 men and 90 women, 148 in all, were discharged cured; 37 men and 36 women, 73 in all, were discharged improved; 19 men and 30 women, 49 in all, were discharged unimproved; and 43 men and 42 women, 85 in all, died.

We learn that as the result of the appeal recently made to the public in behalf of the Pleasant Street Hospital for Women, the sum of nearly twenty thousand dollars has been subscribed, so that the institution now has a capacity of some forty or fifty beds.

Since the commencement of General Grant's campaign, 1000 surgeons and nurses have been sent to the Army of the Potomac, of whom 194 were private physicians of the Volunteer Aid Corps, 42 Contract or Acting Assistant Surgeons, 9 Regular Surgeons, and 775 nurses.

Camp Fry, Augusta, Me., the barracks at Albany, N. Y., and the barracks at Readville, Mass., have been turned over to the Medical Department for hospital purposes.

Dr. R. E. Mathews, of Marlow, N. H., drawn in the current draft, and accepted, has been appointed by the Governor of the State Assistant Surgeon in the 14th N. H. Regiment.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, June 25th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	37	48	85
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.2	34.4	69.6
Average corrected to increased population - - - -	00	00	76.62
Death of persons above 90 - - - - - - - -	0	0	0

Pamphlets Received.—Thirteenth Annual Report of the Physician and Superintendent of the Insane Department of the Philadelphia Almshouse for the year 1863.

Deaths in Boston for the week ending Saturday noon, June 25th, 85. Males, 37—Females, 48.—Accident, 4—apoplexy, 1—congestion of the brain, 2—disease of the brain, 5—inflammation of the brain, 2—bronchitis, 2—cancer, 1—cholera infantum, 2—consumption, 12—croup, 1—cystitis, 1—debility, 2—diarrhœa 2—diphtheria, 1—dropsy, 3—dropsy of the brain, 5—drowned, 1—dysentery, 1—scarlet fever, 2—spotted fever, 1—typhoid fever, 2—disease of the heart, 1—infantile disease, 3—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 4—marasmus, 2—measles, 2—melanosis, 1—old age, 2—smallpox, 3—syphilis, 1—thrush, 1—unknown, 9.

Under 5 years of age, 31—between 5 and 20 years, 10—between 20 and 40 years, 20—between 40 and 60 years, 7—above 60 years, 17. Born in the United States, 61—Ireland, 20—other places, 4.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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CASES OF OVARIOTOMY.

By G. Kimball, M.D., of Lowell, Mass.

[Communicated for the Boston Medical and Surgical Journal.—Continued from p. 373.]

Case V.—Miss ——, of Boston, a lady 34 years of age, naturally healthy, and of excellent constitution, consulted me in December, 1860, on account of an ovarian tumor, with which she had been afflicted more than two years. It was first noticed in the right iliac region, and had gradually enlarged, till now it had attained a very large size, and was beginning to cause serious inconvenience, partly from its size and partly from its manifest effect upon the general health.

Various forms of medical treatment had been pursued, and, as is always the case, without benefit. Thoroughly informed as to the nature, as well as the inevitable termination of her disease, unless controlled by surgical interference, she concluded that her only chance of cure was in an operation for its extirpation.

In pursuance of this conclusion, the March following an operation to this end was attempted. By virtue of certain restrictions, however, as regards any important obstacles that might be encountered, the operation was not consummated. An explorative exposure of the cyst (the tumor consisting, apparently, of a single cyst) showed that it was pretty extensively and firmly adherent to the walls of the abdomen. Drs. Townsend and Cabot, who were present on the occasion, and to whose advice and assistance I was greatly indebted, both joined in the opinion that the removal of the disease under such circumstances would be attended with extreme danger, and was therefore, of course, inexpedient. The wound was closed and dressed without opening the cyst.

A protracted illness of several weeks followed this procedure—occasioned, no doubt, by a subacute form of peritonitis. She became finally restored, however, to her usual condition of health, and so continued, with the exception of the inconvenience necessarily incident to the regularly increasing size of the tumor, through a period of nearly three years. Toward the latter part of the third year it became a matter of necessity that relief should be had in some way, and that without much further delay.

In this view of her situation she resolved, notwithstanding the known difficulties of the case, to take the risk of the only operation which, to her mind, seemed to afford any chance of cure or permanent relief.

Extirpation being fully determined upon, Dr. Washington L. Atlee, of Philadelphia, was sent for, and the case fully considered in consultation at her house. His conclusion, as expressed at the time, was favorable for a successful operation. For special reasons, however, the measure was put off for another occasion—tapping being resorted to at the time, merely for the purpose of affording present relief. Fifty-six pints of a drab-colored, albuminous fluid having been drawn away from a single cyst, afforded immediate and decided relief, of course; and, after a few days' quiet in bed, she found herself in a condition more comfortable than she had experienced for many months before. It was a state of things, however, that continued for a short time only. The refilling began at once, and went on so rapidly, that in less than four weeks the tumor had reached a size more than two thirds as large as before being evacuated. The temporary advantage thus gained being so unsatisfactory, the plan of having the disease extirpated at all hazards, as had been previously determined on as a last resort, was finally carried into effect on the 17th of December, 1863, just four weeks from the date of the previous tapping. As had been already arranged, Dr. Atlee was sent for, and assisted in the operation. Drs. Townsend, Channing, Edward H. Clarke and Hodges were also present. Instead of putting the patient under the influence of pure ether, as had been my usual habit for several years past, I used, on this occasion, at the suggestion of Dr. Atlee, a mixture of ether and chloroform—two parts of the former to one of the latter—and with an effect highly satisfactory.

After first exposing a portion of the cyst by an incision about four inches in length, made in the median line between the umbilicus and pubes, the tumor was punctured with a trocar and pretty thoroughly evacuated before proceeding to its removal. In passing the finger through the opening thus made, it was at once arrested by adhesions, but not so unyielding as to prevent their being overcome by moderate force. As the operation advanced, however, this difficulty increased, the attachments proving firmer and more extensive than had been anticipated. In this state of things, instead of attempting to break them down by passing the hand into the abdomen between the cyst and the adherent parietes, the former was gradually pulled outward, and the attachments to the latter torn away as fast as they could be brought near enough to the incision to be easily reached by the fingers. The entire cyst was thus dislodged from the abdominal cavity with scarcely any further enlargement of the original incision. The tumor was otherwise free, the adhesions proving to be limited entirely to the abdominal walls. No cutting having been resorted to, there was consequently very little bleeding. The tumor being now fully dislodged, it only remained to cut it away after its pedicle had been properly secured by a clamp. Upon examining the parts within the pelvis, before proceeding to close the wound, it was discovered, to the surprise of all, that there still remained another tumor (a diseased ovary), ovoid in shape, and with diameter not less than three by eight inches, unlike the one already removed, inasmuch as by a subsequent examination it was found to be a compound structure, partly cystic, and partly solid and semi-solid, with a variety of compartments filled with contents of various color and consistence. Being found free as to adhesions, it was easily dislodged and cut away, its pedicle having been first embraced in a second clamp.

The operation having now been completed, the wound dressed, and the patient properly disposed in bed, it was very soon discovered that blood was escaping from the wound; moreover, that the flow was disposed to increase rather than diminish. An immediate re-opening of the wound showed at once the source of trouble—the bleeding proving to be an oozing from one or two points from which the adhesions had been torn away. A very slight touch with a solution of the persulphate of iron controlled it at once. A third of a grain of morphine was given as soon as the dressings had been re-adjusted, after which the patient became quiet, passing the following night pretty comfortably.

During the next day, no unpleasant symptom appeared; but in the course of the second night severe vomiting came on, and continued in a greater or less degree till the next evening, and then ceased. Two full days had now elapsed since the operation, and for the forty-eight hours following the patient continued in a comfortable state, giving reasonable promise of ultimate recovery. In the meantime she took some nourishment and stimulants, with now and then an opiate to control an occasional pain in the abdomen.

On the fifth day the symptoms changed for the worse; the paroxysms of pain returned at shorter intervals, and with increased severity; the abdomen became slightly tympanitic; the pulse, hitherto not exceeding 100, quickened to 120, with other characteristic symptoms that gave unequivocal evidence of fully established peritonitis. These symptoms went on with increased intensity for two days longer, and finally terminated in death on the sixth day after the operation.

Post mortem, 24 hours after death. On exposing the cavity of the abdomen, the evidences of inflammation were found extensive. The peritoneum lining the anterior and lateral portion of the abdominal cavity was covered with numerous flakes of lymph, and so too were the intestines to a considerable extent. An effusion of sero-purulent fluid to the extent of two pints or more occupied the iliac and pelvic cavities; and this, likewise, contained shreds of lymph. The viscera, so far as appeared, were free from disease, and there was nothing that indicated a secondary bleeding.

This operation was undertaken with serious misgivings as to its result. The already ascertained fact of adhesions was sufficient of itself to indicate that in order to overcome them considerable violence would be necessary, and that, consequently, there would follow a greater or less degree of inflammation. The extent of this difficulty had not been over-estimated. On the contrary, it proved to be greater than had been calculated. Again: the circumstance of the discovery of a second tumor, though of less consequence on account of size and the difficulty of removal, was nevertheless an important element in estimating the probabilities of recovery. As regards both of these circumstances, however, even supposing that they had been fully understood beforehand, they would probably not have been reckoned by the patient as sufficient reasons for abandoning her fixed purpose of getting rid of her malady. A great portion of the three years following the explorative operation had been passed in great personal discomfort; and the time had finally come when she had to choose either a mere palliative course which she well understood would, at best, only add a few more months to a life that promised nothing but additional suffering, or to take her chance with an operation which, though attended with great danger, might, *perhaps*, restore her to perfect health.

The conclusion to which she finally came was in no degree influenced by her physician or friends; on the contrary, it was the result of a deliberate and intelligent estimate of the probabilities involved in her case—so far, at least, as such an estimate could be formed by a mind highly cultivated, and in all matters scrupulously controlled by conscience.

Several of the circumstances in this case, if considered collectively, might well be reckoned as affording sufficient cause of death; yet compared with certain difficulties known to have occurred in certain other cases of this kind of which we have record, recovery might not have been considered as very remarkable. The mere bulk of the tumor, though unusually great, was probably of little account as affecting the chances of recovery; the breaking away of adhesions, together with the lesions incident to the removal of a second tumor, were probably the chief causes that gave a fatal termination to the case. It was certainly a very unusual combination of unfavorable conditions; so much so, that it would be difficult to find an instance like it on record. And while, on this account, it becomes a case of more than ordinary interest, it ought in no degree to lessen our estimate of the importance and value of the operation in that large class of cases where it becomes the only means by which life may be saved.

TWO CASES OF CARIES OF THE SPINE.

By Charles H. Spring, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

Case V.*—Ella, daughter of B. McQuillan, of this city. I first saw this case Feb. 1, 1863. She was then 2½ years of age; at birth she was a large child, weighing twelve pounds, and continued healthy till she was seven months old, when she was attacked by disease of the hip-joint. Six months later, disease of the spine manifested itself, involving the second and third dorsal vertebræ. When I first saw her she had never walked; she was very much emaciated, in fact, a mere skeleton, and weighing but ten pounds. The skin was dry and harsh to the touch, the curvature quite prominent, and there was great difficulty of breathing; the countenance was pinched and anxious, and she slept but little at night. There was some swelling over the left hip-joint, with considerable tenderness. The appetite was poor, and there was a tendency to diarrhœa. In every respect it was the most unpromising case I have met with. It seemed as if there was hardly a sufficient degree of vitality to respond to any course of treatment; she had lost all power over the limbs, and had but little control over the discharges from the bowels and bladder. The treatment consisted of the application of external support in such a manner as to relieve the pressure upon the diseased vertebræ and support the spine. Ferri et quiniæ citras. was prescribed, with a sitz bath in which sulphuret of potassium was dissolved.

During the first few weeks the gain was very small, and cod-liver oil was substituted for the iron and quinine with manifest benefit. I find in my note-book that by April 5th she had gained one pound in weight, and slept very well at night; the countenance had assumed a better appearance, and the skin appeared more healthy. May 27th, she weighed fifteen pounds.

She continued to improve during the following summer and winter, the difficulty of breathing was entirely relieved, and her general health became as good as that of other children of her age. The curvature has been lessened and she is able to walk, having recovered the use of her limbs perfectly, with the exception of the difficulty in the left hip-joint—which, though improving, prevents her from bearing her full weight upon it.

During the month of April last she had a severe attack of erysipelas, extending over the face and neck, but she recovered from it perfectly, with no recurrence of the previous symptoms. It has been considered that the recumbent position was favorable in the treatment of diseases of the spine, as that was the principal point gained in the "inclined plane," but this child was kept in the recumbent position most of the time on account of the disease of the hip-joint, and yet it was under these circumstances that caries of the vertebræ developed itself.

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* Cases III. and IV. were reported July, 1862.

The recumbent position affords rest to the diseased vertebræ, but unless the patient is restricted to one position it does not afford that perfect security that can be obtained by mechanical appliances properly adjusted.

Case VI.—Arthur, son of S. O'L., of Chelsea. The history, obtained of his parents, is as follows:—At four years of age, he had a fall, striking upon his back, soon after which he began to complain of pain in the back, and after playing a short time he became tired and wanted to lie down. The pain in the back increased, and in a few months a projection of the spine was discovered, which continued to increase rapidly until the time I first saw him, which was in September, 1861, at which time there was a large curvature involving the eighth, ninth and tenth dorsal vertebræ. The child was very much emaciated, and the scrofulous diathesis strongly marked, with light hair, a pale and almost bloodless complexion, and the skin dry and unhealthy, as is usually found where chronic disease exists in a strumous subject. The head was large and the abdomen protuberant. He was able to walk but little, and that only by resting his hands upon his knees; he suffered much from pains in the bowels, and the difficulty of breathing was, at times, very great, and it was increased upon slight exertion.

In moving him it was necessary to exercise the greatest care, as a slight jar or an incautious movement increased the pain in the abdomen. The treatment of this case was similar to that of the preceding cases. Cod-liver oil and iodide of potassium was prescribed, and mechanical support applied in such a manner as to relieve the diseased spine of the weight of the body and cause it to rest more entirely upon the hips; at the same time it tended to restore the spine to its normal position. This course of treatment was followed by marked relief and improvement in the size of the curvature. At first there was a strong tendency to the formation of a lumbar abscess, but this subsided as soon as the curvature—which was the cause of it—was relieved. The patient was allowed to go out of doors and engage in the usual sports of children with but little restraint, as the apparatus interfered but slightly with the natural movements of the body.

He now stands perfectly erect, the curvature having been reduced to a considerable extent, being not more than half as great as it was when I first saw him, in August, 1861.

One of the most prominent difficulties in caries of the spine is the tendency to the formation of abscesses. The pus formed around the point of disease burrows beneath the sheaths of the muscles and comes to the surface in some place remote from its origin, usually in the femoral or inguinal region. In one case, that has recently come under my care, there is an abscess discharging upon the line of the sartorius muscle, midway between its origin and insertion, the pus originating from carious dorsal vertebræ, and burrowing beneath the sheath of the iliacus internus, it passes into the sheath of the sartorius and discharges at the place before mentioned on the left side; on the right side, there is a second abscess opening just below Poupart's ligament. These continued to discharge freely until the back was properly supported, when the discharge began to diminish.

These abscesses are, in the majority of cases of spinal caries, the cause of a fatal termination; as the system, reduced by the previous disease, is but illy able to endure the exhausting discharge from these sinuses. I have found that by applying proper support to the spine these can be prevented where they have not already formed, and the same course will check them when they are already discharging. Among nearly one hundred and fifty different cases of spinal disease there have been but *two* in which abscesses have formed after support has been applied, and in these two the support was not continued in the manner directed.

Out of seven cases that have come under my notice, where abscesses were already discharging, there was but little difficulty in arresting the discharge of pus, except in one case, where it commenced several years previous, and the disease had progressed to such an extent that but little hope was entertained that benefit would result from any course of treatment. In one case the discharge was lessened two thirds within one week from the time the support was first applied to the back, and that, too, with no local treatment directed to the abscess itself.

PROF. GREENE'S CLINIC AT BERKSHIRE MEDICAL COLLEGE.

Reported by Frank E. Paddock.

[Communicated for the Boston Medical and Surgical Journal.]

Oct. 21, 1862.—*Encysted Tumor of Neck.*—James T., aged 20. Has, upon the posterior part of his neck, immediately to the left of the spine, an encysted tumor which has been growing three years, and has been painful during the last six weeks; is now the size of a goose's egg.

The tumor was found, upon cutting down upon it, to be attached by a pedicle to the transverse process of the fifth cervical vertebra, which was carious; this was removed with bone forceps. The wound was then closed with silver wire sutures and healed by first intention, except where a few ligatures protruded that kept up a healthy discharge until cast off. The cyst contained an atheromatous material, with fibrous bands of lymph extending across from side to side in the most dependent portion of the sac, which were probably the result of inflammation.

Granular Conjunctivitis.—Ella F., aged 18 yrs. Has been troubled with sore eyes for two years; has granular lids with opacities of the cornea, producing partial blindness: has heretofore received local treatment exclusively. Prof. Greene spoke of the fundamental importance of constitutional treatment in these cases, unless they were purely of traumatic origin. Local treatment is important as a palliative and adjuvant, but is not of itself curative. This girl was weak, anæmic, had constipation and anorexia. Dr. Greene prescribed potass. iodid., ʒ ij.; syr. sarsa. comp., f ℥ viij. M. A table-spoonful to be taken before each meal, and laxative pills at bedtime. Locally, glycerin., f ℥ j; acid. tannici, ʒ j.; to be applied twice a day.

Recovery was complete in two months.

Sub-acute Synovitis.—Julia F., aged 33 years. Fell, striking the left knee upon the corner of a block of wood, causing, temporarily, severe pain and tenderness, which gradually subsided, to be soon followed by moderate pain, swelling, and tenderness of joint. The swelling corresponded in outline to the line of insertion of the synovial membrane, and fluctuated distinctly. The patient was anæmic; with little appetite; bowels constipated; menstruation regular. Dr. Greene spoke of the great danger, in these cases, of pushing antiphlogistic treatment too far, which often so debilitates the system that the local disease remains, simply from failure of the nutritive forces. The simple indications here, were to regulate the bowels, improve the appetite and general strength, keep the inflamed part at rest, and stimulate the absorbent system. These were fulfilled locally by the application of a splint to the limb, and tr. iodinii to the joint; and internally by the administration of quin. sulph. before, and syrup. ferri iodid. after each meal. A laxative pill was given at bedtime, containing pulvis aloes, ʒ j.; ext. hyoscyami al., ℈ jss.; ext. nucis vomicæ al., grs. x.; ft. pil. no. xxx.

The patient was entirely well in six months.

Ulcerated Stump.—Henry S., aged 35 yrs. Had his left leg crushed by a rail-road car two years ago. The limb was amputated six inches below the knee; the flaps were made very small, so that straps of adhesive plaster were extended across the end of the stump, and up for some distance on both sides of the limb, to overcome the contraction of the muscles and bring the edges of the flaps into coaptation; consequently, great pressure was produced upon the tissues covering the ends of the bones, which soon caused extensive sloughing of the flaps, and finally a large ulcerated surface that had resisted all of the numerous attempts that had been made to heal it.

Prof. Greene remarked, that the great danger in making amputations below the knee is, that, owing to the severe spasmodic muscular contraction following an operation, the posterior flap may be left too small to cover the stump without some tension; that there is very much more danger of getting the flap too small than too large; that the flaps must be ample, to expect a good-looking, healthy stump as the result of any amputation. Prof. G. also stated that when the flaps were necessarily small, from injuries or other causes, the contraction of the muscles can be overcome by applying adhesive straps to the sides of the limb over the muscles, and making extension by means of a cord and pulley as in treating a fracture, thus obviating the necessity of producing pressure upon the end of the stump.

Professor Greene also spoke of the necessity of removing the sharp angle of bone remaining upon the anterior surface of the tibia after being sawn through, this being one very frequent source of the inflammation and sloughing following amputations below the knee. An examination of this case proved the tibia and fibula to be carious nearly to the knee joint. Prof. Greene advised a re-amputation above the knee, which he performed by the circular operation. The stump healed very readily without further treatment. The health of the patient, which before had been failing, is now rapidly improving.

Valvular Disease of Heart.—Grace H., aged 16 years. Has had occasionally, for two years past, pain in the left chest, violent exercise causing dyspnœa and palpitation; had inflammatory rheumatism previous to the appearance of these symptoms. Apex of heart was found on examination to extend to the left of the nipple, and dulness over a larger surface than in normal conditions of this organ. Mitral regurgitation was proved to be present by the usual signs. Prof. Greene spoke of the great liability of organic cardiac disease to originate in inflammatory rheumatism, especially in those cases receiving homœopathic treatment. He also remarked that, in his opinion, with proper treatment acute inflammatory rheumatism, in the majority of cases, can be entirely controlled in ten days without the cardiac complication that so often occurs in this disease. The cardiac affection is frequently latent, the symptoms not appearing until after the subsidence of the articular inflammation. The indications in this case seemed to be for tonics, eliminatives, and an arterial sedative to control the action of the heart. The first was fulfilled by syr. ferri iodid., the second by alkalies, the third by veratrum viride, q. s., to control the circulation. Under this treatment the patient improved rapidly in her general health, the cardiac murmurs being partially removed.

LETTER FROM PHILADELPHIA.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—After much tribulation in one instance, we have succeeded in filling the chairs so recently made vacant in our two medical schools. Dr. B. H. Rand, Prof. of Chemistry in the Central High School, has been elected to that branch in the Jefferson Medical College; and Dr. A. Stillé to the Chair of Practice of Medicine in the University. These are excellent appointments.

We have just held a session of the Pennsylvania State Medical Society, which was largely attended; valuable and numerous papers were read from all parts of the State, and great harmony prevailed. The Great Central Fair in aid of the Sanitary Commission formed a great point of attraction for the delegates from the country, and perhaps contributed much to the attendance by said gentlemen.

The Convention adjourned to meet next year at Altoona; this will be the first meeting out of Philadelphia for several years, and is regarded as a hazardous experiment by some of the older heads in the Association.

Too little interest is felt, as a general rule, in these meetings; the delegates generally appearing anxious to hurry up matters and return to their homes, regardless of the great subject of medical organization which they are specially delegated to attend to. In fact, it would seem that the whole affair is looked upon as a sort of frolic or recreation, a "letting up" from the dull routine of practice, and therefore, the few days spent in the city are more devoted to pleasure and "sight-seeing," than attendance on the sessions of the Society.

We have now a home for our societies in the shape of a commodious hall built by the College of Physicians, our oldest medical association, in fact one of the oldest in the country. The building is of brick, fire-proof, with plenty of rooms, but, in several respects, of miserable construction. One room, much used, is so formed that hearing is almost impossible at any distance from the speaker, and adding to this the incessant noise of travel on both its fronts, destroys all pleasure in listening to a lecture or debate.

Yours, &c., N.

Philadelphia, June 29, 1864.

THE PROPAGATION OF DISEASE BY SHIPPING.

By A. N. Bell, M.D., late P. A. Surgeon U. S. Navy, &c.

In the early history of quarantine, the Southern States of Europe professed, in most cases, to trace the outbreak of plague to the arrival of some ship, hence their commercial cities were almost wholly closed against navigators; and the goods of any one importing the plague were confiscated. These restrictions were based upon the contagiousness of plague; and, as it was found that other malignant epidemic diseases frequently emanated from vessels arriving from almost every clime, in default of ship-ventilation and cleanliness, these, too, were deemed contagious, and subjected to the same restrictions. Hence, plague soon became a common synonym for all diseases propagated by infected vessels.

Du Tertre, in his history of the French Antilles, states that in 1648, the plague, unknown in these islands since the time they were inhabited by the French, was introduced therein by some vessels. Rochefort, too, in his history of the same islands, states that the plague was formerly unknown there as well as in China, and some other eastern countries, until it was carried thither by shipping. Traphan, in his "State of Health of Jamaica," writes of an epidemic that prevailed there in 1671, which was connected with the return of the fleet from the signal Panama expedition. And, according to Moreau de St. Mery, in his history of St. Domingo, the same disease was transported by shipping to St. Christopher's and to Port de Paix. Thence it was traced by Ferreyra de Rosa and Hughes, to Pernambuco, Martinique, and to the Barbadoes.

Hutchinson, in his history of the Massachusetts Bay, states that a fleet which had been fitted out for the purpose of being employed in the winter for the reduction of Martinico, being diverted from its course and returning to Boston from the West Indies, June 17th, 1692, had buried 1,300 out of 2,100 sailors, and 1,800 out of 2,400 soldiers. The distemper spread to Boston, and was more malignant than even the smallpox, or any other epidemic that had been in the country before. In 1699, the same disease, though by this time it began to be more particularly known as yellow fever, was, according to Watson's Annals, imported from Barbadoes into Philadelphia. During the same year William Penn, after an absence of fifteen years, returned; and, by his advice, the Colonial Assembly met at New Castle in 1700, and passed an "act to prevent sickly vessels coming into this government." This was the first legislation in America on quarantine. Yet the recurrence of winter having destroyed the epidemic, occasion, it appears, did not require the enforcement of the law until 1728, in the case of two vessels from Bristol, England, infected with malignant fever. From this time onwards, the various ports in the other colonies gradually adopted the same system with various degrees of severity; and merchants and captains were forced into their observance under heavy penalties. Passengers arriving in infected vessels were cruelly kept on board to sicken and die of diseases from which they would have escaped, without danger to any one, had they been permitted to leave their infected prisons.

In 1738, this evil had become so great at Philadelphia, in consequence of the large number of immigrants in infected vessels, that a quarantine establishment, or *pest-house*, was instituted. This example, too, which was not without precedent in Europe, was speedily followed by other American ports. Acting on the erroneous doctrine of the contagiousness of epidemic diseases, it soon became common to vent the most rigid restrictions against passengers and crews, and to proportionately relax on vessels and goods. Personal contagion henceforth became both popular and profitable to the merchant, because no matter how dangerous soever the ship, or goods imbued with the poison from her, if some unfortunate person could only be found to have had communication, upon him the whole power of the law was visited; and upon his shoulders was thrown the responsibility of carrying the disease. Meanwhile, the vessel was pressed to pratique and unladen—again speedily reladen with fresh material for fomites, and sped off to some new place to disseminate the seeds of death. This is no fancy picture, but a sad reality. It would indeed be easier to trace the propagation of epidemic diseases by the progress of commerce, for the past century, than for the last which preceded. It will suffice, however, for the object of this paper to point out some of the most recent illustrations, such as can be verified by living observers.

It is a remarkable fact, that it has only been since the discovery of gold in California, and the consequent rush of shipping from the ports of the Atlantic, that yellow fever epidemics have prevailed on the Pacific shore. It is well known that in the years 1851–2, the harbor of Rio Janeiro was crowded with shipping, with flags at half-mast, as the signal of yellow fever on board. How many of these vessels were destined for the Pacific we have no means of ascertaining. A few, however, have been clearly traced. About the middle of the year 1851, the steamer *New World*, on her way to California, touched at Callao, after having lost almost her whole crew by yellow fever in Rio. The steamer *Quito*, from England, by way of Rio, where she lost several of her crew by yellow fever, arrived at Callao in April, 1852.

The first German emigrant ships arrived in Callao in December, 1851. During the early part of the year 1852, a mild form of fever broke out in Lima, and along the coast of Peru, which was vulgarly designated "pelusa," just as in 1849, the precursory form of fever, under the name of "polka," prevailed at Rio. From this nucleus the disease speedily developed itself into a perfect type of yellow fever, and has prevailed extensively and almost annually ever since.

In the fall of 1854, the steamer *Ben Franklin* sailed from New York on a filibustering enterprise to Central America. Failing in this she went to St. Thomas, where she remained several months during the prevalence of a severe epidemic of yellow fever on shore; thence, with many passengers on board, to Norfolk, Va., where she arrived June 6th, 1855; first, however, having transferred her passengers to the Baltimore steamboat in the bay. The vessel came to anchor at the quarantine, about a mile from the city, and was reported by her captain to be in a perfectly healthy state. On the 18th of the month, the health officer, having for the second time visited the vessel, and finding no appearance of disease on board, admitted her to pratique. She went up to Portsmouth the next morning, having been anchored at quarantine thirteen days.

On the 5th day of July, a man who had been working on the boiler of the *Ben Franklin* on the 3d, was taken sick, and died on the fourth day afterwards, with unmistakable symptoms of yellow fever. The next day, on the 8th of July, the vessel was sent back to quarantine. Another case, of a man who had been engaged on board the vessel one week, occurred on the 30th of June. This case ran a less rapid course, but finally died with black vomit on the 17th of July. After the ship was sent back to quarantine several other cases occurred on board, and were sent to the hospital. The first cases on shore, among persons who had no communication with the vessel, were in the neighborhood of the wharf where she commenced breaking out and repairing. It was subsequently ascertained that the *Ben Franklin* had a number of cases on board, and several deaths at St. Thomas; and that there were three cases, two of them fatal, on the voyage to Norfolk. Among the passengers who were transferred to the Baltimore boat in the bay, no case occurred. Fortunately for them, by the false representations of the captain of the *Ben Franklin,* they escaped the strictures of quarantine.

In October, 1857, the U. S. steamer *Susquehanna* was ordered from Spezzia, Sardinia, to San Juan de Nicaragua, where she arrived early in December; having touched, by the way, at Genoa, Madeira, and Key West. She remained at San Juan until the first of the following April, having had, during the whole period of time there, a constantly enlarging sick list of a precursory fever. At first, intermittent, then remittent, but all recovering, until, the 20th of March, a case became malignant and died.

The ship put to sea on the 1st of April, and on the 5th arrived off Port Royal, Jamaica, with one hundred and six officers and men down with yellow fever. Most of these were sent to the hospital, and, on the third day afterwards, the ship left Port Royal for New York. The sick list rapidly increased during the passage, and upon arrival at New York quarantine, on the 15th of April, there were fifty patients on the sick list.

The remarkable feature in this instance is, that at San Juan, where the yellow fever first appeared on board the Susquehanna, there was no yellow fever, and the disease has never been known there. Yet all the climatic conditions calculated to produce it exist in great abundance. The circumstance, therefore, cannot be regarded otherwise than as illustrating the peculiar liability of a ship, even above the most favorable conditions of shore, for the origination of infection. It is also a remarkable illustration of the fallacy of attaching the danger of communication to personal contagion, instead of to the infected material of commerce. It was fortunate for the place, that the Susquehanna left so soon. The same thing has been exemplified on numerous other occasions. The propagation of yellow fever to Bay Ridge, from the quarantined shipping of New York in 1856, is an equally prominent example. The restrictions imposed upon persons that year, and previously, at the New York quarantine, had no more influence in restraining yellow fever than would be exercised at the present time over the prevalence of cholera infantum by shutting up a dozen families from the Five Points, because their children are dying with it. Yet the absurdity of the practice in the one case, and of the mere suggestion in the other, is only equally palpable with the neglect of the true source of danger in both alike.

The bubbling of villainous smells from the liquid filth of some of our streets serves to warn the passer-by of his near approach to the source of the river of death. And so, too, the dark, damp hold of a filthy vessel from a warm climate, with a stagnant pool of bilge-water at her keelson, leaves no less doubt of her dangerous condition. Yet both alike are unheeded.

That the chief danger of epidemic diseases consists in personal contagion, no well-informed person now believes. Hence, to subject *a person* to quarantine is no less an outrage against common sense than personal freedom. Yet epidemic diseases are propagated by commerce now with no less certainty than they were before quarantine was ever thought of; and the arrival of a fleet, or even a single vessel, "with a direful plague aboard," at the wharves of New York now, would be fraught with no less danger to the inhabitants than was realized by the arrival of Sir Francis Wheeler's squadron at Boston in June, 1692. With perpetual local conditions, such as the municipal authorities of New York and Brooklyn appear to habitually enjoy during the summer months, originate the diseases which carry off more than one fourth of the human race! Under such auspices are produced all the fatal epidemics; and that they do not prevail so constantly here as they do in Vera Cruz, Bengal, or Cairo, is in no respect due to a more intelligent administration of sanitary measures, but wholly depends upon our natural advantages of locality and climate.

Some of the most odious restrictions of quarantine have of late years been removed. But the misfortune is, that wholesome measures have not been substituted in their place. By successive cruising in warm climates, vessels are continually liable to contract, generate, and retain infection. And, unless effectually *destroyed* when it has once become manifest, it is perpetually liable to new outbreaks, and to the danger of being communicated to the material of commerce or to new places favorable for its reception. Mere detention at quarantine, exposure to a temperate atmosphere, deodorants and fumigants, are, it is well known, worse than useless measures, for they only serve to give confidence in a false security. Under the new quarantine law at New York, there is provision for the most efficacious means of disinfection. And if the Health Officer of this port is properly seconded in his efforts by the merchants *in the application of extreme degrees of heat and cold* to infected vessels and merchandise, we may indulge a reasonable hope of a true reform. One that will not only give the merchant his ship and goods in the shortest possible time, but which will also protect the community from the danger of infection from shipping.—*Hunt's Merchants' Magazine.*

ON SOME POINTS IN THE MEDICINAL TREATMENT OF CHRONIC PULMONARY CONSUMPTION.

BY JOHN K. SPENDER, SURGEON TO THE EASTERN DISPENSARY, BATH.

THE multiplicity of remedies recommended for the treatment of pulmonary consumption is apt to embarrass the Practitioner whose experience of the disease is small, and who has not gathered very accurate and definite views of its pathology. Careful clinical records, drawn with precision, but not too long, are a better help to the study of constitutional and local phthisis than most "systematic" treatises; the bedside itself being, of course, the best place of all.

In a recent work on "Diseases of the Chest"—a work of considerable merit and importance—we may find illustrations of a common defect in what are called systematic books. "Undue acidity of the stomach" is mentioned as a frequent concomitant of pulmonary consumption; but we are advised to give the patient "mineral acids, with vegetable bitters and taraxacum," and if these do not answer, "liquor potassæ, carbonates of the alkalies, or nitrate of bismuth." It is not easy to understand how "undue acidity" can be removed by administering more acids, and it would seem more intelligible at least to try the alkalies first. A number of substances are specified as possessing useful "alterative" properties, and the cough is to be allayed by one or more of a long catalogue of drugs. The most serviceable medicine for relieving night-sweats is not named at all. The treatment of acute phthisis is dismissed in remarkably few words. There is, in short, an entire absence of any emphatic recapitulation of what we have to do, why it is to be done, and how we can most satisfactorily do it.

It has passed almost into an aphorism, that the fact of a large number of substances being alleged to cure a disease is a demonstration of its incurability. But the surest method of lessening our therapeutic ignorance is, first, to ascertain the exact limits of our knowledge, and then to make the most of all the certain knowledge we possess. And the history of the treatment of consumption shows that the number of authentic remedies for it has diminished in a tolerably close ratio with the increase of our trustworthy information concerning its pathology.

(*a*) Dr. Hughes Bennett lays down as a fundamental fact, that "phthisis pulmonalis is a disease of the primary digestion;" this disease producing scrofulosis, or that constitutional state which precedes the development of tubercle. The "excess of acidity in the alimentary canal" is the peculiarity of phthisis, so that the "alkaline secretions of the saliva and of the pancreatic juice are more than neutralized, and rendered incapable of either transforming the carbonaceous constituents of vegetable food into oil, or of so preparing fatty matters introduced into the system as will render them easily assimilable." Upon this pathological axiom we build the first therapeutic necessity, that alkalies are, as a rule, beneficial in phthisis.

(b) The blood of a consumptive person is almost always deficient in red corpuscles; for red corpuscles can be fashioned only from healthy chyle corpuscles, and healthy chyle corpuscles cannot come from "diseased primary digestion." Hence, we deduce the second therapeutic necessity, and we administer iron in addition to abundant meat food, for the power of iron in helping the formation of red blood corpuscles is a therapeutic proverb. With reference to the general question of the administration of iron in phthisis, the great authority of Trousseau must, in my opinion, be set aside.

(c) The emaciation which accompanies—and is one of the special peculiarities of—pulmonary consumption suggests the third therapeutic necessity,—that of prescribing hydro- and hydra-carbonaceous foods and medicines. Owing to some unique chemic and dynamic qualities, cod-liver oil fulfils this necessity in an unrivalled way.

Other remedies may be required in pulmonary consumption, but they are demanded as mere auxiliaries, and should be supplied as such. They are simply to be grouped around those that satisfy the three main therapeutic postulates just enumerated,—that is to say, *(a)* we ought to give an alkali; *(b)* we ought to give iron; and *(c)* we ought to give cod-liver oil. Let us now examine the manner in which these postulates can be carried out.

(a) Potash water, bicarbonate of potash, lime-water, and the aromatic spirits of ammonia, are the alkalies which would be naturally employed. Dr. T. K. Chambers is the unwearying advocate of the benefits of lime-water; it may be taken as a common beverage, or in union with fresh cold milk. Tradition pronounces the aromatic spirits of ammonia to have "diffusible stimulant" virtues, whatever those may be; it is a most useful medicine when diarrhœa is absent, but otherwise the bicarbonate of potash and lime-water are to be preferred. I do not pretend to affirm that acids are never called for, and never serviceable; for sometimes they do good simply as a short change from an over-alkaline treatment.

(b) What salt of iron can be combined in solution with an alkali? This is the practical question to solve. The tincture of sesquichloride of iron is clearly out of the question; while the ammonio-citrate and the sulphate of iron are decomposed and precipitated when an alkali is added to them. An inquiry into the resources of the Pharmacopœia discloses a potassio-tartrate of iron, resembling in physical properties the ammonio-citrate, but endowed with the chemical property of allowing an alkali to be added to it without decomposition. A draught such as the following is a pleasant piece of pharmacy, and may be taken by a patient twice or three times a

day:—℞. Ferri potassio-tart., gr. v.; spts. ammoniæ arom., ♏ xv.; spts. ætheris chlor., ♏ x.; aquæ puræ, ad ℥ j. M. ft. haustus.

This is the elementary iron and alkaline draught which, when opportunely given, has produced results that have seldom disappointed me. To this draught iodide of potassium and chlorate of potash may be joined, if either of these salts seem to be required by any intercurrent malady. The administrration of iron is usually contra-indicated by diarrhœa; but if this exist as a mere passive flux, the saccharated carbonate of iron may be united with the compound chalk and opium powder, and continued for a long time. Here the remedies themselves are unaltered, but their form is accommodated to a casual incident of phthisis, which imperatively requires to be relieved before the "primary digestion" can do its proper functions.

(c) It is desirable to prevent an undue multiplication of the "times and seasons" for taking physic; and so the appropriate doses of cod-liver oil may, if the patient choose, be added to the iron and alkaline draught, with which it is easily miscible.

Subordinate to these three great principles of medicinal treatment, which can almost always be simultaneously carried out, particular remedies may be requisite to meet particular exigencies.

Dr. Hughes Bennett justly condemns that over-drugging plan which treats symptoms rather than causes; and which, among other things, suffocates a cough by narcotic medicines. But before the constitutional remedies have had time to amend that irritative state of bronchial passages and tubes on which cough mostly depends, morphia may be very useful—taken in a daily dose at bed-time. With this may be combined some port-wine. and a few grains of oxide of zinc, the agency of which salt in alleviating night perspirations Dr. Theophilus Thompson has not in the least overrated.

During the last twelve months, I have watched almost from day to day nearly thirty cases of pulmonary consumption, in which the medicinal treatment now sketched has been faithfully carried out, and with very notable success. Concerning the permanence of this success, time will bear its testimony. The orthodox diet and hygiene have, of course, had ample share in realizing this good result. Experience teaches patience, however; and it is the merest empiricism to be in any hurry about the management of what is often the type of a chronic disease. The "pre-tubercular" stage of phthisis is not a formula only, bnt an important vital fact; and whenever, as Professional men, we get hold of this "pre-tubercular" stage, we should try and lay our therapeutic and hygienic foundations firm and deep, in the hope of literally obeying that true, though hackneyed, precept, that "prevention is better than cure." But, when opportunity does not allow us to "prevent," let us not always despair of curing; and, at the worst, let no adherence to a stupid and ignorant routine forbid us to grant, when possible, that euthanasia which is to no one a more blessed boon than to the consumptive sufferer.—*London Medical Times and Gazette.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, JULY 7, 1864.

INDISCREET RECOMMENDATIONS.—In our last number we endeavored to impress upon our readers the necessity of preserving a strict reticence in private conversation, with regard to the relations existing between physician and patient; but of no less importance are the results which still oftener follow the injudicious public expression of our commendation of persons or things. In the one case, a momentary indiscretion or betrayal of confidence may bring ruin or disgrace upon a person or family; in the other, the physician's desire to oblige, or dislike to refuse, leads him to thoughtlessly sign his approval of a man or measure, which may be the cause of most serious consequences to the public. It is certainly not a pleasant matter to refuse an acquaintance a recommendation, if he ask for it; and we do not sufficiently reflect that, however cool and guarded our doubts of the applicant's fitness may make our expressions, it is almost wholly our name in connection with it, which will be considered by those to whom the petition is addressed. We have in mind a recent instance of the appointment to an important position of an unfit person, upon the recommendation of a gentleman of our profession, whose name was considered an unquestionable voucher of any man's competency, and whose thoughtlessness has been the indirect cause of great inconvenience and injury to others. We are very cautious in signing our names to a paper which may render us personally liable to pay dollars and cents on condition, but the possible losses the effect of our signature may bring upon others, are not allowed to outweigh the unpleasantness of using that manly monosyllable—no. If we were held accountable for the integrity of those who are lifted into public confidence or important positions by our guaranty, and our own character were made to suffer if theirs proved false, our national honor would be less often disgraced, and much misery would be prevented.

It is not physicians alone, however, who are thus incautious in the employment of their names. Some of our readers are themselves, even now, losers to a considerable extent, through the dishonesty of a collector whose honor and integrity were most confidently vouched for by several well-known merchants, and upon whose recommendation this person was trusted and employed by them. Were these gentlemen obliged to refund the sums, of which they were instrumental in depriving their owners, it is very certain that they would never again recommend an improper person for so responsible a position.

Again, we sometimes rashly lend the influence of our names to a measure which we partially approve or only partially understand, and are surprised at last to find ourselves represented as fully endorsing what we never intended to advocate. A communication lately appeared in an evening paper of this city, soliciting subscriptions in behalf of a Hospital for women and children. This may be a desirable object, but we question if the gentlemen whose names appeared in support of it were delighted to see them attached to a communication of somewhat questionable taste in a non-professional print, and we doubt if they intended thus to publish their approval of the system of committing a hospital to the medical care of female practitioners, an interpretation which will without doubt attach itself to this measure among the profession.

THE following beautiful tribute to the memory of Dr. John Ware and his son Dr. Robert Ware, was read by Dr. Holmes at the collation of the Massachusetts Medical Society, on the occasion of their late anniversary. Dr. Holmes has written few things more just and appropriate than this touching poem. It appears in the *Atlantic Monthly* for July.

IM MEMORY OF J. W.—R. W.

No mystic charm, no mortal art
Can bid our loved companions stay;
The bands that clasp them to our heart
Snap in death's frost and fall apart;
Like shadows fading with the day,
They pass away.

The young are stricken in their pride,
The old, long tottering, faint and fall;
Master and scholar, side by side,
Through the dark portals silent glide,
That open in life's mouldering wall
And close on all.

Our friend's, our teacher's task was done,
When mercy called him from on high;
A little cloud had dimmed the sun,
The saddening hours had just begun,
And darker hours were drawing nigh:
'Twas time to die.

A whiter soul, a fairer mind,
A life with purer course and aim,
A gentler eye, a voice more kind,
We may not look on earth to find.
The love that lingers o'er his name
Is more than fame.

These blood-red summers ripen fast;
The sons are older than the sires;
Ere yet the tree to earth is cast,
The sapling falls before the blast;
Life's ashes keep their covered fires—
Its flame expires.

Struck by the noiseless, viewless foe,*
Whose deadlier breath than shot or shell
Has laid the best and bravest low,
His boy, all bright in morning's glow,
That high-souled youth he loved so well,
Untimely fell.

Yet still he wore his placid smile,
And, trustful in the cheering creed
That strives all sorrow to beguile,
Walked calmly on his way awhile:
Ah, breast that leans on breaking reed
Must ever bleed!

So they both left us, sire and son,
With opening leaf, with laden bough:
The youth whose race was just begun,
The wearied man whose course was run,
Its record written on his brow,
Are brothers now.

Brothers!—the music of the sound
Breathes softly through my closing strain;
The floor we tread is holy ground,
Those gentle spirits hovering round,
While our fair circle joins again
Its broken chain.

FOREIGN INTELLIGENCE.—Prof. Solbrig, of Munich, has been appointed Prof. of Legal Medicine at Berlin in place of Casper, lately deceased, who left his fortune of 500,000 Rix thalers to the University.

The daughter of Priessnitz, the founder of the cold-water-cure and a non-believer in vaccination, recently died in Kaschau of smallpox.

From a comparison of the statistics of 21 nations in Europe and America, it appears that one blind person is found among 1267 persons. The limits are: in America 1: 2489, in Norway 1: 540.

According to a recent investigation in France, the public and private institutions for the insane were found to contain 26,000 inmates; or one insane person to every 1350 inhabitants.

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* For the information of our distant readers we would state, that Dr. Robert Ware died during the siege of Little Washington, from disease brought on by over-exertion as Surgeon of the Forty-fourth regiment Mass. Volunteers.

The Emperor Maxmilian I. has bestowed the grand cross of the Guadeloupe Order upon Prof. Skoda.

Prof. Langenbeck has been appointed Surgeon-General of the Prussian army, and has gone to Schleswig-Holstein.

Prof. Oppoltzer has been chosen honorary member of the Russian Imperial Society of Physicians.

Messrs. Longman & Co. announce the publication of an abridgment of Copland's Medical Dictionary, brought down to the present state of medical science by the author, and Comparative Anatomy and Physiology of Vertebrate Animals, by Prof. Owen. Mr. R. B. Carter has translated Zander's "Ophthalmoscope; its varieties and uses," from the German.

In a recent communication to the Paris Academie des Sciences, M. Garrigou states that bones of the Ursus spelæus had been found in caves, bearing evidence of having been broken by man in the same way as the long bones of the reindeer are to this day by northern nations, for the purpose of extracting the marrow,— thus proving the contemporaneity of man and this fossil bear.

The most recent excavations at Pompeii have yielded, besides a bronze statuette of Silenus, another most important discovery. Hitherto, no well with water had ever been found in Pompeii; during these excavations, however, a subterranean room was laid open, with a well 25 mètres in depth, in which the most excellent drinking water was found.

Prof. Waitz, of Marburg, author of the recent work, "Anthropologie der Naturvölker," has died, with his great work unfinished.

THE Commencement and Anniversary of the Long Island College Hospital was held in Brooklyn, N. Y., on the evening of the 1st inst., when the degree of M.D. was conferred on thirty-seven candidates. The address to the graduates was delivered by Prof. J. C. Hutchinson, M.D.; an elegant gold chain was presented, in behalf of the class, to Prof. E. N. Chapman; and a resolution complimentary to the Professor of Therapeutics and Materia Medica was passed.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JULY 2d, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	51	55	106
Ave. mortality of corresponding weeks for ten years, 1853—1863,	33.3	30.6	63.9
Average corrected to increased population - - - -	00	00	70.3
Death of persons above 90 - - - - - - -	0	0	0

DEATHS IN BOSTON for the week ending Saturday noon, July 2d, 106. Males, 51—Females, 55.—Accident, 2—anæmia, 1—apoplexy, 1—congestion of the brain, 3—disease of the brain, 5—bronchitis, 2—cholera infantum, 5—consumption, 10—convulsions, 5—croup, 5—diarrhœa 3—diphtheria, 3—dropsy, 3—dropsy of the brain, 3—drowned, 2—dysentery, 1—dyspepsia, 1—eczema, 1—epilepsy, 1—erysipelas, 1—scarlet fever, 4—typhoid fever, 2—furunculus, 1—gangrene, 1—disease of the heart, 5—infantile disease, 1—intemperance, 1—disease of the kidneys, 2—inflammation of the lungs, 5—marasmus, 4—measles, 7—paralysis, 1—peritonitis, 1—scalded, 1—sunstroke, 2—teething, 1—unknown, 8—gunshot wounds, 1.

Under 5 years of age, 55—between 5 and 20 years, 7—between 20 and 40 years, 22—between 40 and 60 years, 12—above 60 years, 10. Born in the United States, 82—Ireland, 13—other places, 11.

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IMPERFORATE ANUS AND RECTUM.

By J. Mason Warren, M.D., Boston.

[Read before the Suffolk District Medical Society, May 28th, 1864, and communicated for the Boston Medical and Surgical Journal.]

The following cases of imperforate anus, with malformation of the rectum, present several points of interest in connection with the question of attempting to afford relief by a surgical operation. In cases of simple occlusion of the anus, there can be no doubt of the propriety of opening it, either by a puncture or by a crucial incision, maintaining the passage afterwards by the use of bougies. The great majority of cases, however, as they occur in practice, are by no means so easily disposed of, being, as a general rule, complicated with an imperforate condition of the lower part of the rectum, and in many instances also with an abnormal opening communicating either with the external surface of the body, or more commonly with the bladder or vagina. In a very considerable proportion of cases, also, the anus is perfectly formed externally, but terminates within in a cul de sac, and a few instances have been recorded in which there was total absence of the rectum, and even of the whole large intestine.*

Upon the subject of operating for the relief of imperforate rectum, surgeons are by no means unanimous. The great fatality which attends these operations, the difficulty often experienced in the after-treatment to prevent the closure of the artificial opening, and lastly, and perhaps chiefly, the very imperfect character of many of the so-called cures, resulting in life-long discomfort to the patient, have induced many surgeons of experience altogether to discountenance all attempts at operative interference. On the other hand, the certainty of death if left to nature, the fact that the operation has sometimes been fully successful, the promise afforded by improved operative methods, and, finally, the natural reluctance of the surgeon and friends to leave anything untried which may possibly save life, combine to justify any rational attempt at relief. The theory that the cures are necessarily imperfect, which affords the only real argument against operating, is disproved by the very successful cases recorded by Benjamin Bell, Amussat, Latta and others.*

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* Of this latter malformation I have seen one case, in which the large intestine was absent, with the exception of the cœcum.

The operation which promises the best results, and which I have several times performed with success, consists in freely dissecting through the tissues which intervene between the cul de sac of the rectum and the external surface of the body, then drawing down and puncturing the bowel, and finally securing it by sutures to the margins of the divided integument; thus forming a new canal with a continuous mucous lining, instead of the long fistulous passage which results from a mere puncture with the bistoury or trocar.†

During the past year I have seen four cases of imperforate anus and rectum. In two of them there was a fistulous passage communicating in one case with the vagina, and, in the other, opening in the perinæum half an inch in front of the normal position of the anus. In both of these cases I was able to reëstablish the natural passage by the operation just described. In a third case, upon which I operated by puncturing the distended rectum, the child died, and in a fourth case I advised against any operative interference. These four cases I now propose to relate, exhibiting to the Society the specimens from the two last mentioned.

CASE I.—*Imperforate Anus, with abnormal Opening of the Rectum externally.*—A female child, now 2½ years old, was born with a small fistulous opening directly behind the vagina, and half an inch in front of the normal position of the anus, through which the fæcal matter was discharged very slowly and with much difficulty. The child was therefore brought to the hospital, where the opening was enlarged by one of the surgeons, who enjoined it upon the parents to keep it from closing up again by the daily employment of tents. In spite, however, of the moderate amount of attention which was given it, the aperture became gradually contracted so as to cause much distress whenever the bowels were evacuated, and to lead the parents to bring the child again for operation, in the spring of 1863, when it was about two years old. The operation was performed by passing a curved instrument into the fistulous opening, turning it backwards, and pressing the intestine down upon its point where the sphincter ani muscle should naturally be situated. Here a dissection was made until the sound was exposed, and the intestine freely opened by a crucial incision. The intestine was now attached by two or three points of suture to the skin, and a tent passed well into the opening. The child bore the operation well. After a few days the tent was removed, and the daily use of bougies, gradually increasing in size, was commenced. By the end of the third week it became difficult to introduce the bougie, owing to the very powerful resistance offered by the sphincter muscle; this, however, always yielded to pressure, and the removal of the bougie was followed by a free discharge of fæcal matter. At the end of a month the child left the Hospital, the mother being requested to bring her twice a week in order to have the bougie passed and the abnormal opening cauterized for the purpose of closing it. Three months afterwards the case was lost sight of, a small fistulous opening still remaining, through which there was occasionally a slight discharge; the new anus performed its functions perfectly.

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* For the references to these cases I am indebted to the valuable paper of Dr. George H. Gay, in the published "Records of the Boston Society for Medical Improvement," for November, 1857.

† I have performed a similar operation in cases of occlusion of the vagina, dissecting out the whole mass of obstructing tissues and bringing together with sutures the upper and lower portions of mucous membrane. The successful operations of Amussat for imperforate rectum were also done in the same way.

CASE II.—*Imperforate Anus, with Rectum opening into the Vagina.*—In June, 1863, a fine. healthy girl, six weeks old, was brought to me, with the rectum terminating in the vagina. An incision had been made by the attending physician at the point where the anus would be naturally situated, but he had not succeeded in establishing the passage. On account of the very early age of the child, and the small size of the organs, it was very difficult to determine the exact condition of the parts. The mother said that the child was perfectly well, except that the discharges took place through the vagina. A probe passed into the vagina entered about two inches; in front of this another probe could be passed into the urethra, these two passages being entirely distinct. After considerable manipulation it was found that the whole posterior wall of the vagina, and the corresponding anterior wall of the rectum, were wanting. The operation for the restoration of the natural passage was done as follows: A large silver hook with a ball at the end, was passed into the vagina and forced down against the spot at which it was proposed to make the new opening. Here it could be indistinctly felt through the thick mass of the soft parts which intervened. A crucial incision was made through the skin, and the soft parts dissected to either side until the silver ball, pressing down the intestine, was felt in the wound, the wall of the intestine only intervening. A small aperture was now made in the gut and the hook passed through, so as to hold the parts in position. The aperture in the intestine was now enlarged and its margins stitched to the integuments by four sutures. A plug was then introduced into the opening to the depth of an inch and a half or two inches. After the operation a free discharge took place from the vagina, showing that the plug would not interfere with the passage of the fæces while the new anus was being established.

This case has been under observation until the present time (now nearly a year). A large and well-formed canal has been established in the normal position, through which well-formed solid discharges take place from time to time, while the more liquid fæces still make their way through the vagina. The child is still too young, and the vagina at present too inaccessible for any attempt to be made to close the abnormal passage; this it is proposed to do at a later period. Meanwhile the child enjoys perfect health.

Case III.—*Imperforate Rectum.*—April 9, 1864. A very small child three days old, which had not yet nursed, was brought to me with the rectum imperforate about three quarters of an inch above the anus. The abdomen was distended almost to bursting. The child quiescent. A finger being introduced into the anus, encountered the obstruction, but there appeared to be no rounding out of the septum, indicating the continuance of the canal above. It was, however, decided to make an exploratory puncture with a trocar. On the instrument being thrust in, the meconium began slowly to flow out, until at least half a pint had escaped, when on pressure being made on the abdomen flatus followed. The finger was now passed up above the obstruction so as to freely dilate it. No large cavity or depot of the fluid could be detected. It was advised that the finger should be passed up once or twice a day, which the medical attendant promised to do, and also to report the course of the case.

The child took food immediately after the operation, and for a time seemed relieved. It died, however, the same night, about twelve hours after the operation. On examination a quantity of blood was found in the abdominal cavity, but no meconium. A fibrous cord about an inch long intervened between the rectum below and the cul de sac of the imperforate intestine above. The great distension of the intestine by meconium had forced it down into the pelvis, bringing it in contact with the bottom of the anal cavity. On thrusting in the trocar the intestinal contents freely escaped, but on the withdrawal of the canula the upper portion of intestine retracted, and the aperture in it closed so as to be with difficulty distinguished. The oozing of blood into the abdominal cavity probably took place from the lower aperture. The very unusual state of the parts disclosed by the autopsy showed that no operation could have been of service.

Case IV.—*Imperforate Rectum.*—May 12, 1864. A female child, not quite 24 hours old, was lately brought to me with imperforate rectum. The abdomen was quite distended, vagina and anus natural; the little finger could be passed half an inch within the anus, when it was suddenly arrested. When the child strained a sensation was felt of something pressing down on the finger, but it did not convey the impression of a portion of intestine distended with fluid. On passing the little finger of the other hand into the vagina, the uterus could be distinctly felt as in its natural position. The finger could then be passed over the finger in the anus against the spine, but detected no tumor; nor could any appearance of distended intestine be distinguished elsewhere, although the finger could be turned round and felt through the parietes of the abdomen. A probe was passed a little way into the urethra, but did not penetrate the bladder, although urine, thick and apparently semi-purulent, was discharged when the examination was commenced. It was thought possible, but not probable, that the intestine might communicate with the bladder. Under the circumstances no operation was advised. Dr. D. W. Cheever, who had examined the patient the day before, had already given the same opinion.

This patient lived nine days, taking little or no nourishment, the abdomen becoming gradually more and more distended. On post-mortem examination the intestine was found to terminate in a cul de sac between one and two inches above the imperforate anus; the sigmoid flexure, instead of being in its proper place, was found transposed to the right iliac region, where it lay in contact with the right side of the vagina, from which it could readily have been reached and punctured. A probe was easily passed to the fundus of the uterus, the os and cervix being very large. I was surprised to find with what ease the little finger could be passed without violence to the very bottom of the vagina, a fact which may be of material importance in elucidating some of these very obscure cases.

The specimen, together with that last mentioned, are now in the Warren Anatomical Museum.

PROF. GREENE'S CLINIC AT BERKSHIRE MEDICAL COLLEGE.

Reported by Frank K. Paddock, Clerk of Clinic.

[Communicated for the Boston Medical and Surgical Journal.]

Nov. 29, 1862.—*Necrosis of Inferior Maxilla.*—Mrs. H., aged 40 years. Began one year since to have considerable swelling of the tissues surrounding the lower jaw, with entire absence of pain. The swelling continued, without any apparent change or additional symptom, until four months previous to presenting herself at the clinic, when suppuration took place, accompanied by severe pain in the jaw, and a number of abscesses were formed in the subcutaneous tissue. The health of the patient, which had been unexceptionably good for the twenty years previous that had been spent in the family of Gov. Briggs as a domestic, now began to decline rapidly. She was emaciated, had lost her appetite and former constitutional vigor, giving her a decided cachectic appearance. Her teeth had been gone several years. An examination was made by passing a probe through the fistulous openings connected with the abscesses, and the bone found to be carious and separated from the periosteum, the sequestrum of the right side being loose and detached from the ramus.

Prof. Greene advised the removal of the jaw as soon as the cachexia of the patient could be corrected. This result was secured in a few weeks by the administration of ferruginous and vegetable tonics. Prof. Greene then performed the operation by making an incision within the mouth, through the tissues covering the alveolar processes down to the bone, extending from one ramus to the other. These tissues were dissected off, and the left ramus removed from the body of the jaw with the bone forceps, the body being removed through the mouth intact, without an external incision. The wound healed rapidly, and the patient's health continued to improve. Soon a new but small arch of bone was found, formed in place of the removed jaw, and is now gradually increasing in size.

Prof. Greene remarked, that owing to the absence of any apparent idiopathic or traumatic cause for the disease of the bone in this case, its etiology was very obscure, but that it simulated closely the phosphoric disease which often occurs in the facial bones of persons employed in the manufacture of matches, or in other business necessitating the inhalation of phosphorus fumes.

Warty Tumor of Eye.—James P., aged 50 years. Has a warty tumor upon conjunctiva, covering left eye-ball. Prof. Greene remarked that these warty tumors of the conjunctival membrane, although primarily benign, unless removed in an early stage of growth were liable to take on a malignant form of disease.

Prof. Greene excised the tumor, the wound healing without farther treatment, leaving the patient's vision unimpaired and appearance much improved.

Multiple Fatty Tumors.—Jacob T., aged 35 years. Has extending over trunk and limbs, leaving head and neck entirely free, a large number of small tumors, varying in dimensions from the size of a pea to that of an egg. Had applied to quite a number of physicians for treatment, all of whom had called this trouble an enlargement of the lymphatics.

Prof. Greene observed, that owing to their irregular distribution, peculiar feel and absence of all the usual constitutional symptoms attending inflammation and enlargement of the lymphatics, his diagnosis would be fatty tumors; that the patient's declining health, which had been progressing for some time, was attributable to over-medication as a natural consequence of an incorrect diagnosis, rather than an evidence of increasing disease.

Prof. Greene recommended the patient to forget all his anxieties, and let the tumors remain until more fully developed; but his request was so urgent that the Professor finally removed one of the tumors to gratify him, which fully verified the diagnosis.

One year subsequently the tumors had not increased in size or number, and the patient was enjoying excellent health.

ON THE ACTION OF THE BROMIDE OF POTASSIUM IN INDUCING SLEEP.

By Henry Behrend, L.R.C.P.E., &c.

Dr. Garrod, in his recent lectures on the British Pharmacopœia, has mentioned that the bromide of potassium, when administered in large doses, produces drowsiness. I do not know whether the profession at large is aware of this fact, but as I have never previously seen any record of it (being indebted for my first information on the subject to the statements of Dr. Brown-Séquard), and as I have, during the past twelvemonth, had ample practical experience of its use, the following cases are submitted to demonstrate the value of the remedy in the treatment of insomnia and restlessness, accompanied by and dependent upon nervous excitement and irritability. If its employment upon a larger scale should confirm the results at which I have arrived (and of which Dr. Brown-Séquard has repeatedly assured me), its importance cannot well be overrated; as it is better borne than opium or any of its preparations, is free from the unpleasant effects—such as headache, constipation, &c.—produced by that drug, and the system does not so rapidly become accustomed to it as to require its administration in constantly-increasing doses.

The first case in which I prescribed it was that of a gentleman, thirty-six years of age, of highly nervous temperament, who had undergone much mental excitement consequent upon the dangerous illness of a very near relative. There was no constitutional malady present, and the only symptom was loss of sleep, and the debility, both bodily and mental, consequent upon it. He had not enjoyed a really good night for weeks, and this preyed upon him to such an extent as almost to preclude the possibility of his sleeping; for his mind was constantly intent upon this one subject, and never more so than when he retired to rest, so that it seemed as if the very effort to obtain sleep prevented its accomplishment. He was in very low spirits, and had failed in quieting the nervous system by opium in its various forms, valerian, and other anti-spasmodics and sedatives. He was recommended to take twenty-five grains of the bromide of potassium dissolved in a little cold water three times a day, before meals, for a week. At the end of this time, he called to inquire if it was necessary to continue the treatment, as he had enjoyed several nights' excellent sleep, and had to a considerable extent regained his former cheerfulness and mental calibre. As he was still, however, somewhat nervous about his night's rest, it was thought advisable that he should not entirely give up the employment of the bromide; and he continued taking it once in the twenty-four hours, at bedtime, for a fortnight longer. He had now implicit confidence in the power of the remedy, and, what was of still greater consequence, was regaining confidence in his own powers of obtaining natural sleep, and he gradually ceased having recourse to the medicine. He always, however, kept a dose of it by his bedside, so that if he woke in the night and was tormented by the fear of not sleeping again, he might at once take it. During the last few months this fear has also left him, and he does not now use the bromide on the average more than once in three weeks. He sleeps perfectly well for six or seven hours at a time, and wakes comfortably and naturally, with entire freedom from the dread and depression which he formerly experienced on waking.

A second case, perhaps even more remarkably illustrative of the beneficial action of this salt, is that of a gentleman, forty years of age, who consulted me in the month of October last. He was of a most excitable and nervous temperament, and was engaged in mercantile transactions of great magnitude, the extent of which indeed seemed quite to overwhelm him, although without any grounds as to a fear of their ultimate result in a pecuniary point of view. He was quite unable, however, to banish them from his mind day or night; he had lost his natural sleep, was harassed and fatigued during the day, and sought my opinion as to whether he ought not at once to withdraw from business, although the sacrifice entailed thereby would be very great, and he was most anxious to avoid it. I told him to place himself under treatment for a few weeks, and if no benefit were derived at the end of that time, such a step as he contemplated might be necessary. I prescribed the bromide of potassium as in the last case: twenty-five grains to be taken three times a day before meals. At the end of a week he was much better, slept naturally and well, and was consequently much more sanguine as to his capability of attending to his affairs. Good sleep having been procured, I thought it better to attend to the condition of the nervous system, and ordered the sulphate of strychnia to be taken in commencing doses of the thirtieth of a grain, to be gradually increased to the tenth of a grain, thrice daily. He was advised to have a dose of the bromide of potassium by his bedside, or to take one before going to bed, if he felt nervous about his night's rest; but since the first week of the treatment I do not think he has once found it necessary to have recourse to it. He sleeps perfectly well, has regained spirits and confidence, and has quite abandoned the idea of his unfitness to attend to his business transactions. He continues taking the tenth of a grain of sulphate of strychnia twice daily.

Other instances might be adduced of a similar character, but the above will serve as a type of the cases in which the administration of the bromide of potassium appears likely to be most useful—those, namely, in which the nervous element preponderates; and it is in these that, for the most part, opium and its preparations fail to produce any good result, and are not well borne by the system, frequently even adding to the excitement and irritability under which the patient labors. There can be no doubt, moreover, that cases of this type are unfortunately on the increase, since the highly artificial mode of life of the present day, especially in large cities, perpetually stimulates the nervous energy to the highest possible degree; so that even in the strongest constitutions the mental equilibrium is but too often shaken, and the weaker ones yield speedily to the excessive demands made upon them. The dose of the bromide recommended may appear large, but it is in all cases easily tolerated, and produces neither disagreeable nor toxical effects; the appetite is not interfered with, the alvine evacuations are regular and copious, and irritability of the bladder—a frequent accompaniment of restless nights—is greatly relieved. The only unpleasant result I have witnessed has been slight and temporary headache; and Dr. Brown-Séquard has informed me that he has given it with perfect safety for several successive weeks in drachm doses. Of the temporary paralysis, and weakening of sexual desire and power, which are said to follow upon the administration of large doses of the bromide of potassium, I have seen nothing. I should wish to try this remedy in the treatment of the restlessness of delirium tremens, but have not had the opportunity since I have become acquainted with its action upon the nervous system.—*London Lancet.*

ASAFŒTIDA IN AFFGHANISTAN.

By M. C. Cooke.

To what was before known with certainty of Asafœtida in Affghanistan may be added the following particulars, communicated principally by Dr. Bellew, who was formerly attached to the mission to Kandahar. Some portion may be a repetition of the same facts previously obtained by other travellers, and which are hereby corroborated; for other information now communicated, for the first time, Dr. Bellew is mainly responsible. This brief notice can, however, only be regarded as supplementary.

The asafœtida of commerce is obtained from only one plant in Affghanistan, viz., *Narthex asafœtida.* It grows wild on the hills about Herat and Furrah, and is never cultivated, though hundreds of the Kakar tribe from the Boree family, who collect the gum, remain in the deserts to tend and water the plant.

The "tear" sort is the gum resin that exudes, and dries drop by drop, from incisions around the top of the root; the "lump" sort is the gum resin as it exudes from a broad surface, as when the top of the root is sliced off. The latter sort is more frequently met with than the former, but I do not know of any difference in the qualities of the two sorts. There are several other umbelliferous plants in Affghanistan which resemble the asafœtida plant in external appearance, and which also, like it, when wounded, exude a milky viscid sap, but I never heard that the sap of these plants (also gum resins) was ever collected by the natives, though the plants were very abundant, especially on the western slopes and ranges of the Sufaid Koh.

The frail vaginated stem, or the lower cluster of sheathing leaves (of the asafœtida plant)—the former belonging to old plants, and the latter to young ones—is removed at its junction with the root, round which is dug a small trench about six inches wide and as many deep. Three or four incisions are then made around the head of the root, and fresh ones are repeated at intervals of three or four days; the sap continuing to exude for a week or fortnight, according to the calibre of the root. In all cases, as soon as the incisions are made, the root-head is covered over with a thick bundle of dried herbs or loose stones, as a protection against the sun; where this is not done the root withers in the first day, and little or no juice exudes. The quantity of asafœtida obtained from each root varies from a few ounces to a couple of pounds weight, according to the size of the roots, some being no bigger than a carrot, whilst others attain the thickness of a man's leg. The quality of the gum differs much, and it is always adulterated on the spot by the collectors before it enters the market. The extent of adulteration varies from one-fifth to one-third, wheat or barley-flour or powdered gypsum being the usual adulterants. The best sort, however, which is obtained solely from the leaf-bud in the centre of the root-head of the newly sprouting plant, is never adulterated, and sells at a much higher price than the other kinds. The price of the pure drug at Kandahar varies from four to seven Indian rupees per "mani-tabriz" (about 3 lb.), and of the inferior kinds, from one and a half to three and a half rupees per "man." The asafœtida is commonly used by the Mahometan population of India as a condiment in several of their dishes, and especially mixed with "dal." It is not an article of general consumption in Affghanistan, though often prescribed as a warm remedy for cold diseases by the native physicians, who also use it as a vermifuge. The fresh leaves of the plant, which have the same peculiar odor as its secretion, when cooked, are commonly used as an article of diet by those near whose abode it grows; and the white inner part of the stem of the full-grown plant, which reaches the stature of a man, is considered a delicacy when roasted and flavored with salt and butter.

The annual value of the asafœtida trade with India is estimated in the Government Reports of the North West Provinces at about £2,200.—*London Pharm. Jour.*, May 1st, 1864, from *The Technologist.*

Bibliographical Notices.

The Diseases of the Ear; Their Diagnosis and Treatment. A Text-Book of Aural Surgery in the form of Academical Lectures. By Dr. Anton Von Tröltsch, Aural Surgeon and Lecturer in the University in Wurzburg, Bavaria. Translated from the German and Edited by D. B. St. John Roosa, M.D., Assistant Surgeon to the New York Eye Infirmary. Illustrated with Wood Engravings. From the Second and last German Edition. New York: William Wood & Co., 1864. pp. 254.

The Ear; Its Diseases and their Treatment. Illustrated by Engravings. By Franz Adolph Von Moschzisker, M.D., Oculist and Aurist, &c. &c. Philadelphia: Martin & Randall. Boston: Brewer & Tileston. 1864. pp. 319.

The Aural Surgery of the Present Day. By Dr. W. Kramer, Berlin. With Two Tables and Nine Wood Cuts. Translated by Henry Power, Esq., F.R.C.S., M.B. Lond., &c. &c. Publication of the New Sydenham Society. London. 1863. pp. 154.

The work of Von Tröltsch consists of a series of twenty-five lectures, each of moderate length and well and clearly written. The colloquial and easy style of the author, while it in no degree detracts from the importance of the topics he discusses, is suited to interest the reader, and to engage his careful attention. Those, therefore, who do not read the German language, have great reason to thank the translator, Dr. Roosa, for presenting to them this valuable volume in an English dress. The rendering of the original, it is true, bears constant marks of imperfect knowledge of our idiom; but the book is a very readable one, and an acquisition to the library of the practitioner in general, as well as to the specialist, in the diseases of which it treats. We must here add, that we have heard it stated by an eminent aurist, that the translation fails, in some instances, fully or rightly to express the author's ideas. These instances, however, are but few, and the general success attained may well excuse these departures.

The author in his opening lecture alludes to two facts, which have only slowly, and of late, come to be—we had almost said unwillingly—acknowledged; viz., the great frequency of diseases of the ear, and their extreme importance. A somewhat extended experience, for the past few years, has convinced us how wide a field is open to the aural surgeon. This is, perhaps, even more the case in Europe than in this country; or it may be that the greater attention given to diseases of the ear both in Great Britain and on the Continent of Europe, has drawn more patients to the public institutions established for their relief, and augmented also the private lists of those practitioners who are specially, or in part, devoted to this branch of medical science. Great would be the surprise of those not familiar with the facts, at the throngs of ear patients who besiege the infirmaries and dispensaries in London—to cite that city alone—and who enjoy there the privilege of the ministrations of such men as Toynbee and Harvey—not to mention others. Dr. Tröltsch, however, very justly remarks the lack of systematized teaching upon the diseases of the ear, nearly everywhere. In our own experience, as much truly practical information is to be obtained by those having the *entrée* to the public practice of the distinguished aural surgeons of Great Britain, as in any other portion of Europe.

Whilst the study of aural diseases has only been of late, as it were, struggling into notice, its importance has impressed itself upon many industrious and gifted men, whose careful analysis of cases and skilful treatment have already advanced the branch to a first-class position. The authors whose names we have placed at the head of this paper, as well as all observers qualified to pronounce upon the subject, remark the wide-spread ignorance that still exists in the community in reference to ear-diseases, and the imperative necessity of bringing them under proper care at an early stage of their existence. The popular idea has always been, and, to a wonderful extent, still is, against any interference, whatever, in ear-affections; unless, indeed, it be to endeavor to allay pain, and to remove inspissated and superabundant cerumen. It is notorious that the greatest unwillingness is constantly met with, among the friends of patients with *otorrhœa*, for example, in regard to the intervention of our art. They are either "afraid to have the running stopped, lest the brain should suffer;" or they think it "will wear itself out, in time." It is nearly a daily experience with us, to encounter these delusions; and, not very infrequently, we are sorry to say, these erroneous and most mischievous views have been confirmed by the physicians usually in attendance in the family. A little boy is now under our care with caries of the mastoid process, following long-continued otorrhœa. The physician's advice, persistently, had been only "to keep the ear clean." An unrecognized polypus likewise existed. In another instance, seen only a day or two since, the mastoid processes and a portion of one temporal bone are extensively carious, from neglected otorrhœa following scarlet fever. The "let-alone" practice had been eminently efficacious and successful! It would seem to be the imperative duty of reasonable people, both in and out of the profession, to dispel, as far as it lies in their power, this lamentable ignorance.

A lengthened and detailed review of the work of Dr. Tröltsch is only what is due to its merits, but must come from other hands. We only purpose to advert, briefly, to some of the more striking and valuable views he presents, and to hint at certain differences in practice, which, as it seems to us, distinguish the German aural surgeons, as a class, from the English, and perhaps from the French. Our aural practitioners, here, have, we think, been mainly influenced by the British authorities, although not ignorant of, nor failing to recognize the merits peculiar to, the German theory and practice.

There is nothing especially new in Dr. Tröltsch's directions for examining the external ear. All that he says, however, seems to us eminently judicious, clear and practical. We come, now, to his peculiar views on the illumination of the ear, with the view to inspecting its condition. He is not inclined to favor the use of *direct* sunlight illumination, but prefers the method which he claims as original with himself. This is by means of reflected, and not of direct light. The following is the translator's rendering of his author, on this subject:—"If we take a sufficiently large and strong concave mirror, and throw, by means of it, a strong stream of ordinary daylight upon the ear, we can see the parts clearly to the minutest portion, which with the naked eye is impossible, and this method sweeps away all the evils attending the other ones." * * * * The use of the reflector enables you to turn the ear away from the window, the patient being between the window and the surgeon. * * Sunlight thrown directly into the ear is too dazzling, and excites at the same time a distinct feeling of heat in the membrana tympani. * * * The greatest advantage of this method of illumination, however, is that it may be practised in all kinds of weather, when the patient lies in bed (if necessary with a candle), and we are not obliged to turn the patient to a window if it be too far off, and a light-colored wall be near." (*op. cit.* pp. 31, 32.) The use of reflectors, in examinations of the ear, certainly did not originate with Von Tröltsch; and we presume that all surgeons conversant with aural diseases are constantly in the habit, when the weather is unfavorable, of using artificially reflected light. Von Tröltsch's method, by employing merely the *daylight*, reflected into the ear, and where "white or grey clouds" afford him "the best light," we cannot regard as, par excellence, *the* method for illuminating the ear. We are borne out in our convictions of the invaluable efficacy of direct sunlight, properly managed, for making aural examinations, by the majority of observers. The heating of the membrana tympani, alluded to by our author, we have never heard complained of, and the over-illumination referred to has never occurred to us. While not denying the worth of Dr. Tröltsch's method, we do not join him, by any means, in pronouncing that it should do away with all others.

The author's remarks and directions in regard to syringing the ear, are worthy of careful observance. There is much to be learned, even in performing so apparently simple an operation. Laymen almost never syringe an ear properly. In regard to the reliance to be placed upon the syringe for the removal of foreign bodies, of whatever nature—unless metallic or stony, which are not commonly found—we cannot too strongly concur with Tröltsch's advice,—"do not attach more importance to foreign bodies in the ear than really belongs to them, and try faithfully, with syringing, if you are not able to remove the body." (p. 49.) We remark a case inserted by the translator, in this connection, which so nearly resembles one lately occurring to us, that we refer to it. A sentry on duty had "a bug" enter his ear:—efforts were injudiciously made by "non-medical men" to extract the insect by means of forceps! Much inflammation was excited, the operators working blindly, "with no knowledge of the situation of the bug." Subsequent copious *syringing* brought the insect away. In our own case, a young woman came, saying she felt something moving "deep in one ear," and she thought "there must be something alive there." She also had much pain in the ear. On examination with the ear-speculum, brisk motion, as if of the antennæ or legs of some insect, was clearly observed, the insect being apparently in close contact with the membrana tympani. A little oil was turned into the ear; the disagreeable sensations ceased at once, and then a moderate syringing, with warm water, dislodged the intruder —dead—and an unmistakable *bed-bug!*

The chapter on furuncles in the auditory canal is full of sensible advice. Von Tröltsch advocates early incisions, and does not wait for the formation of pus. Referring to local blood-letting, we can fully endorse his recommendations—and Wilde's before him—of applying leeches "on the meatus" (as the translator has it), rather than either before or behind the ear. We have found infinitely more advantage from having the leeches applied *within* the meatus, in inflammatory affections, whether of the meatus or of the middle ear, than from any more external abstraction of blood.

If there is any one point in which the German aural practitioners differ from most others, it is in their more frequent—we had almost said in their constant—use of the Eustachian catheter, not only for diagnostic, but for therapeutic purposes. Perhaps we may be allowed to say that whilst there has, perhaps, been too much caution on the part of British practitioners, especially, there has been and still is rather too great a readiness to use the instrument alluded to, by the Germans and their followers. May not the old maxim, "*in medio tutissimus ibis,* be applicable here ? It savors, to our mind, something of the hobby, this universal plunging of the silver tube, in all cases, even those the most remotely hinting at its use, into so delicately lined a canal. Even Von Tröltsch, himself, says, "We find on the cadaver, erosions, and trifling ulcerations about the mouth of the tube, and these are not to be diagnosticated without the Rhinoscope, and can [may] easily produce emphysema. It is very evident that such a delicate membrane, as we have here, can [may] be very easily injured." (*op. cit.* p. 90.) Toynbee, in his late elaborate work, may go somewhat too far in saying he is "disposed to think" the Eustachian catheter "useless as a means of diagnosis," but his caution in employing it, therapeutically, it seems to us, is preferable to its too common and nearly indiscriminate use. In the chapter on "Nervous Deafness," we cannot too highly recommend the warning of the author not to mistake—as has doubtless too often been done—a catarrhal affection of the middle or of the inner ear, for nervous disorder. "Where a doubt exists whether we have to do with a catarrhal or a nervous difficulty in hearing, whether with disease of the middle or the inner part of the ear, you will do well, in my opinion, in every relation, scientific as well as humane, to consider the first form the more probable one, especially since, in this event, a proper treatment, in most instances at least, is able to stop the progress of this evil, while real appearances in the inner part of the ear, if not dependent upon anomalies of blood and circulation, are, as a matter of course, almost entirely removed from our therapeutic interference, and we shall be obliged to 'let things go as it pleases God.'" (*op. cit.* p. 227.)

We have perused the above volume with pleasure and profit, and shall always consult it with confidence.

The work presented to the profession, and not to it, only, but avowedly to the *public,* by Dr. Von Moschzisker, is well printed and illustrated—also, well bound—with brilliant red edges to the leaves—and is garnished with a portrait of its author, scrupulously well "gotten up," in tightly buttoned coat, "garrotte" collar, elaborately brushed hair, and ribbon of some "order" seemingly at the second button-hole. This frontispiece we refer to merely as raising the question of good taste ; and the latter is perhaps not much more violated, in this instance, than in the translation from Von Tröltsch we have just been noticing. In that work, the frontispiece consists of a group of two figures, the aurist and his patient, the former in a be-flowered and be-sprigged *robe de chambre,* with its pendant tassels ; the latter with a resigned expression of countenance, and in a jaunty, cross-legged posture. The surgeon is examining the ear, *à la mode de* Von Tröltsch.

We will add that the copy of the original work, which we have inspected, has *not* such a frontispiece!

While we find nothing especially objectionable in the compilation of Dr. Von Moschzisker, we cannot say that anything original particularly strikes us. Indeed, the author seems to have a remarkable facility for transplanting whole pages in succession from other works to his own volume; and the illustrations equally come from well-known authors, if we except some few which he claims to have originated—and which are ingenious enough—being representations of instruments for the introduction of the cotton pellet as recommended by Yearsley in cases of perforated membrana tympani; and also figures of his own apparatus for transmitting vapors to the inner ear.

We remark that the author well describes "congenital closure" of the meatus auditorius externus—not, so far as we now remember, especially alluded to by authors. The affection, of course, is rare.—We some weeks since operated in a case where the meatus was smoothly closed, as if by a prolongation of the natural integument. This was not, however, congenital, but succeeded a violent inflammation of the parts, which followed measles. The remedial procedure adopted was that which we now observe Dr. Von Moschzisker describes, viz.:—a crucial incision, cutting out the flaps with small curved scissors, the introduction of a cylinder of prepared sponge, and the recommendation to insert a small golden tube, for a time, when the parts shall have cicatrized. Hearing, which was abolished prior to the operation, was immediately, in a measure, restored, and will doubtless improve. Unfortunately, the patient is an exceedingly delicate girl, and has caries of the bony meatus and mastoid process of the other side.

We referred to the popular appeal or intimation set forth by Dr. Von Moschzisker. In our opinion, such a course is far from being warrantable in any respectable and honorable practitioner—and such, we, of course, suppose Dr. Von Moschzisker to be. To announce that a medical book is written "for the public," as well as for medical men, smacks too much of the personal element; and such works are liable, as in the present instance, to be heralded and concluded in somewhat pompous and inflated phraseology. They thus lose in true dignity, whilst they in no degree really advance that popular knowledge of the necessity of attention to diseases of the ear, to which we alluded in the first part of this paper. To endeavor to convey any knowledge *to the public* beyond this, is futile and dangerous. Does any one believe that a man or woman of the people, can manage, for themselves, an otorrhœa, or an ear-ache, with Dr. Von Moschzisker's book in one hand, and a syringe or a leech in the other? "A little learning is a dangerous thing." Countless homœopathists thus practise upon themselves, with the Hand-books of their apostles for their guides. Peace be with them! But we cannot join Dr. Von Moschzisker, precisely, in his peroration, where he exclaims, funnily, "Lend me your ears!"

The book ends with a "Repertorium" of remedies (for the "public," of course), systemic as well as local; an explanatory table of medical terms, symbols and abbreviations; a copious "Glossary" (for the public, again, we conclude); and an enumeration of authors in aural literature—all which, save the last, we deem superfluous—for that, the author certainly deserves our thanks.

We have given the title of Dr. William Kramer's work, merely that we may have the opportunity to congratulate the profession upon its acquisition in the form of so excellent a translation as that by Mr. Power, under the auspices of "The New Sydenham Society." The author's reputation is too widely extended to require any additional word from us. We will only say, in conclusion, that all who read "The Aural Surgery of the Present Day," cannot fail to join us in a hearty acknowledgment of its value and interest. W. W. M.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, JULY 14, 1864.

The Army Ration.*—Surely a laudable task is this which Professor Horsford has undertaken, and as we shall see by his astounding statements, one worthy of engaging the attention of all well-wishers of our brave fellows in the field, as well as those desirous of lightening the financial burdens of the nation at large. War is an awfully expensive game, regarded merely from a prudential point of view, and seems to beget a recklessness and disregard of mere property which extend more or less from the field of military operations to the numerous ramifying interests more or less directly connected with it. Complaint enough has been made since the war began of improper food and insufficient supplies, not so much of late, happily, as formerly; but circumstances may at any moment arise which may lead to the old privations and their many direful consequences We are glad, therefore, to see so vigorous an effort made, by one man at least, as the pamphlet before us shows, to avert such a catastrophe.

Prof. Horsford appears to have had two main objects in view when he undertook the task he has so well accomplished. The one, the supply to the troops of a nutritious, palatable and concentrated form of food, of a character much less perishable than that usually supplied; the other, the saving to the public treasury of an immense sum of money, amounting to millions in the aggregate, every year.

Passing over much interesting matter on the general subject of rations—how much food a soldier requires, a comparative statement of the allowance furnished in the principal armies of the world, the loss incurred in the process of salting meats, and the deleterious effects of prolonged use of them as articles of food, &c.—we come to "the Marching ration." We are all familiar with the announcement that the troops have been ordered to supply themselves with three, five or eight days' rations, in anticipation of a movement. Prof. Horsford thus shows what becomes of these rations:—

> "These are given out, cooked, packed in the haversack and knapsack, and laid aside to await expected orders to march. Meanwhile the daily rations are issued, cooked and eaten. A few days pass; the necessity, real or fancied, for the move-

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* The Army Ration. How to diminish its Weight and Bulk, secure Economy in its Administration, avoid Waste, and increase the Comfort, Efficiency and Mobility of Troops. By E. N. Horsford, late Rumford Professor in Harvard University, Cambridge, Mass.

ment has gone by, and the marching rations are found to be spoiled and are thrown away. Or, if the march is undertaken, with the haversack and pack stuffed to unwieldy size and weight, the soldier soon feels obliged to abandon a part of his load; if he stops to rest, and leans back on his pack, his hard bread is crushed; if it rains, and the pack does not wholly shelter the rations, the powdered crackers, sugar, coffee, and meat become, together, an offensive mass and a *total loss.* Sometimes the salt beef and pork, though issued, are not taken by the men, and constitute a part of the aggregate loss. These losses in the Army of the Potomac have been estimated by competent authority on the spot, from the organization of the army, to be *little less than one third of the total cost of the commissary supplies.*"

Here is room for improvement surely. One important item in which great saving might be effected, and a more palatable and digestive article of food supplied, is in the bread. Prof. Horsford discusses this subject quite at length, going into the chemistry of bread-making, pointing out how much more nutritious and digestible raised bread is than the bread of the soldier—discussing the methods by which the most nutriment may be obtained from a given quantity of wheat, and finally showing how a self-raising flour may be prepared so that any one, by the simplest processes of cookery, may at any moment obtain a light, palatable and digestible bread. Roasted and ground wheat, also, he recommends as a marching ration for its compactness, its durability and its very agreeable flavor. The mountaineer of Chili uses it as his sole food on long journeys. When hungry he stirs it into cold water and drinks it—and for weeks together depends upon it as his only food. The Texan ranger uses roasted or parched corn, ground and mixed with sugar. The Lake Superior voyageur and the trappers of that region use roasted and ground corn incorporated with melted fat. Many interesting pages we must thus hastily glance at, to come to the consideration of the "meat for the marching ration."

And here we must confess we are astounded at the facts and statistics which Prof. Horsford arrays before us. Let any one who wonders at the price of beef at the present day read this chapter, and his astonishment will vanish. The only wonder is that a sirloin steak or a roasting cut can be found in any butcher's stall, such a procession of beeves—in the largest part wantonly wasted and lost, from the defective methods in which the army is supplied—is steadily swallowed up in Virginia,—the front disappearing so rapidly that the rear can hardly keep up with the vanishing train. The transportation of the cattle from the West in crowded cars with little water, food or sleep, during several days of continuous travel, with the subsequent hard driving and scanty forage, greatly deteriorates the quality of the beef when it is slaughtered. The necessity of cooking it the very day the animal is killed, and the want of means for preserving it, together with the habitual improvidence of the soldier, entail a very great loss. In the ordinary process of slaughtering, the loss in weight from the removal of the viscera, &c., and the loss of blood, in good cattle fresh from the pasture, is said to be at least one third of the entire weight of the animal. This is technically called shrinkage. Of the actually edible portions seventy-five per cent. is water. Prof. Horsford says in this connection:

"In a practical experiment, which came to my knowledge as having recently been made in New York, with an ox weighing 1,200 pounds dressed, and of course some 1,800 pounds on foot, there were found 400 pounds of edible meat, which yielded when dried to fibre some 112 pounds, a quantity amounting to 6.22 per cent. of the live ox. Small as this seems, the cattle in the train of an army on the march yield a much less return. The army rule in regard to beef-cattle is, that when the cattle weigh over 1,300 pounds on the hoof, 45 per cent. shall be deducted for shrinkage; when below 1,300 pounds, 50 per cent. The fat, it would seem, is assumed to have totally disappeared. But much more has, in reality, disappeared. From the statement of commissary officers having charge of the commissary supplies of some of the regiments of the Potomac army from its commencement, it appears that it requires about one ox and a half to furnish the fresh beef ration to a regiment of 225 men—or about six oxen to 1,000 men. This meat was issued as dressed quarters, which were weighed. So that twenty-four quarters of beef-cattle in the condition in which they are slaughtered in that army, weigh on an average 20,000 ounces, or 1,250 pounds. Assuming the bone, tendon, and gristle to be three-fourths of the whole dressed quarters, which is not far from the fact, there would remain 312 1-2 pounds of edible meat, or 52 pounds to an ox; of which one quarter only is dry nutriment, or 13 pounds to an ox. And this is an average specimen estimated by the commissary officers from whom I have received the information, to have weighed, when purchased by the Government, 1,300 pounds, on the hoof. Six of these must have weighed 7,800 pounds, and would cost now, delivered at eight cents a pound, $624! *Seventy-eight pounds* out of *seventy-eight hundred! One per cent. only!*

"Neither hide, bones, or tallow of any kind, as a general rule, is saved on the march. In a word, the dry edible fresh beef derived from cattle on the hoof, according to this estimate, costs the Government $8 a pound, or with the three pounds of water $2 a pound, or with the bone, tendon, and gristle 50 cents a pound. But a reduction so great cannot be presumed to be uniform in the Army of the Potomac, though it is known that during the last two winters the cattle got little or no forage from the time they were sent down by boat and the cars to Falmouth, and by cars to Brandy Station, till they were slaughtered. At Hilton Head the loss in flesh was less. At Chattanooga it was greater. Col. Eaton, in charge of the subsistence department at the post of New York, has informed me that the army ration of fresh beef at Hilton Head cost the Government 30 cents, at a time when canned meats of perfect quality, cost, delivered, but 16 cents a pound. Eight ounces of good canned meat may be assumed to be a full equivalent for the fresh beef ration with its bone, tendon, and gristle, as supplied to the individual soldier at Hilton Head. At the present prices of canned meats, of say 24 cents a pound, delivered, the ration of fresh beef at Hilton Head must cost the Government 45 cents. A pound must cost 36 cents, bone, tendon and gristle included. The edible meat would therefore cost some three to four times as much, say $1 25 per pound, and with its water eliminated, $5 per pound."

And yet this enormous expense, with its prodigious waste of the beef resources of the country, provides at best but very indifferent, and frequently deleterious fresh meat for the army. The inquiry naturally arises, is there any help for all this? Can the waste be stopped, and better food supplied; and, if so, how? This is the problem Prof. Horsford has undertaken to solve, and the result of its consideration is, that this end will be fully attained by preparing fresh meat at a distance from the seat of war—the animal being slaughtered when in a healthy condition; that it may be cooked, seasoned and made thoroughly palatable, and preserved indefinitely in the form of sausage. He shows that by proper apparatus the whole dressed carcase of the ox may thus be preserved.

"The mincing apparatus would reduce the meat to fineness; the steam or baking apparatus would boil, or bake, or roast it; currents of heated air would dry it; evaporating pans might perform the same office, at temperatures so low as to preserve in palatable form all the juices of the meat; and Papin's digesters would resolve a large part of what is now utterly lost on the march—soft bone, gristle, tendon and connective tissue, into most nutritious food, to be incorporated with the minced meat or used as stock for soup. The different kinds of meat, and the tongue, heart, brain, and concentrated soup stock might, for particular purposes, if desirable, be disposed in different sausages. But for army use, the whole might be resolved into homogeneous sausage meat.

"Such sausage might be fried or made to contribute to a stew, the great resort in camp, or hash with bread-crumbs or roasted wheat and water, or a soup with vegetables, when these may be procured. The only cooking utensil absolutely needed would be the half of an old regulation canteen, or even a drinking-cup.

By these two devices, the dried wheat and the sausaged beef, Prof. Horsford shows that a soldier might easily carry rations for twelve or even twenty days, of food which would be as good at the end of that time as at the beginning, and of greatly superior quality to that ordinarily used. He goes into a calculation based on the diminished bulk occupied by the various improved rations which he recommends, and the result is, that with the aid of mules carrying self-raising flour or roasted wheat and sausaged beef in bulk, it is not difficult to see that an army of one hundred thousand men might swing around from one base of supplies to another, with an interval of thirty or even forty days between.

The comparative expense of supplying the army with beef in the various methods which he discusses, is summed up as follows :—

"By the first method, the ox on the hoof at 8 cents a pound, and weighing at Washington 1,400 pounds, costs $112.00, and yields 60 pounds of edible meat at $1.86.6 per pound.

"By the second method, there are 450 pounds of canned meats, put up at Boston, at 23 cents a pound, and costing $103.50; for transportation to the army, say $4.50. Total, $108; making 450 pounds at 24 cents a pound.

"By the third method, the live ox of 1,500 pounds weight, at 6 cents a pound in Illinois, would cost $90.00; assume the cost of dressing, cooking, curing and packing at $14.00. Total, $104.00; to be reduced by the value of the hide and tallow, say $16.00. For transportation of the sausaged meat of the entire ox, an equivalent of 700 pounds of edible meat reduced in weight to one third, say $3.00; a net cost of $91.00; making 700 pounds at 13 cents a pound.

"Placing these results side by side, the Illinois ox of 1,500 pounds weight on foot, would yield by the first method 60 pounds at $1.86.6 a pound; total, $112.00. By the second method, 450 pounds at 24 cents a pound; total, $108.00. By the third method, 700 pounds at 13 cents a pound; total, $91.00.

"To supply 100,000 men with alternate daily rations of 5 ounces of edible meat* for a year (the Potomac Army are supplied with fresh beef four days in the week) would cost—

By the first method - - - - - -	$11,136,328
" second " - - - - - - -	1,425,781
" third " - - - - - - -	741,406

"The saving to the Government by the adoption of the second method would be $9,710,547; of the third method would be $10,394,922."

The saving in the bread ration by the adoption of the various expedients suggested, is estimated at $1,655,645 annually for an army of 100,000 men. Taking into consideration the numerous expenses incident to transportation, deterioration, &c., we have the following summing up, of the cost to the Government, above what it need be, applied to an army of 600,000 men for a single year.

"On the fresh beef ration, according to the extreme estimate in the Army of the Potomac - - - - - - - - -	$62,334,632
Or according to the basis of the cost at Hilton Head - - - - -	38,980,957
On the marching ration - - - - - - - - - -	39,420,000
On the average bread ration - - - - - - - - - -	9,933,870

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* This is the estimated quantity which the 20 ounces of poor meat, with its bone, tendon, gristle, &c., actually yields to the soldier.

Well may our author add, in view of such wholesale waste, that "the cattle of the country are *disappearing.* Our ability to furnish the army with fresh beef is diminishing in a fearful ratio."

Prof. Horsford's pamphlet treats of various other topics which we have no room to notice—such as coffee, tobacco, the waste of fresh bread by drying, &c. He also suggests some very ingenious utensils for cooking in the field, of so simple a character that the soldier may always have them with him; but all these we must pass over to come to his concluding

"*Summary.*—The proposed modifications in the ration would reduce the consumption of flour from *one half* to *two thirds*, with increased comfort and profit to the men, saving of transportation to the Government, and of raw material to the country.

"They would reduce enormously the consumption of cattle, with advantage to the soldier, saving to the Government in money and of cattle to the country.

"They would, in great degree, prevent the loss of the one third of the total commissary supplies now sacrificed in the marching ration.

"The weight of the day's marching ration might be reduced from 13 to 16 ounces, in place of the present ration of from 32 to 40 ounces; and in bulk, to 35 cubic inches, in place of the present 100 cubic inches, without any diminution of the nutritive value. Twenty days' rations of the proposed supply may be more easily carried than the present eight days' rations.

"Finally, the proposed ration would increase the mobility of the army, and save time."

Making all due allowances for theoretical calculations, we think it must be evident to every one that there is much in Professor Horsford's pamphlet worthy of the most serious consideration. Of course no one supposes that fresh or salted meat will ever be wholly supplanted in army use by the articles which he recommends; the most that could be looked for would be their limited use under circumstances which would make them specially valuable. Whether the experiment will ever be tried, is very uncertain. It is a gigantic task to break down a routine system on so large a scale as that in our army. Private enterprise, the action of some single State with regard to its own soldiers or a part of them, might make an experiment which would lead the Government to undertake it on a larger scale. We hope that the statements which we have exhibited to our readers may not be entirely words thrown away.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, July 9th, 1864.

DEATHS.

	Males.	*Females.*	*Tota*
Deaths during the week - - - - - - -	43	32	75
Ave. mortality of corresponding weeks for ten years, 1853—1863,	39.1	33.2	72.3
Average corrected to increased population - - - -	00	00	79.58
Death of persons above 90 - - - - - - -	0	0	0

Deaths in Boston for the week ending Saturday noon, July 9th, 75. Males, 43—Females, 32.—Abscess, 1—accident, 5—inflammation of the bowels, 1—disease of the brain, 3—inflammation of the brain, 2—cancer, 1—cholera infantum, 1—consumption, 10—convulsions, 1—croup, 1—debility, 1—diarrhœa, 3—diphtheria, 1—dropsy of the brain, 1—dysentery, 4—scarlet fever, 4—ship fever, 1—typhoid fever, 2—gangrene, 1—gravel, 1—disease of the heart, 2—homicide, 1—infantile disease, 2—jaundice, 1—jumping from window (under the influence of delirium tremens), 1—congestion of the lungs, 1—disease of the lungs, 1—inflammation of the lungs, 3—marasmus, 3—old age, 1—paralysis, 1—puerperal disease, 2—scrofula, 1—smallpox, 2—unknown, 7—gunshot wound, 1.

Under 5 years of age, 35—between 5 and 20 years, 9—between 20 and 40 years, 16—between 40 and 60 years, 13—above 60 years, 3. Born in the United States, 49—Ireland, 21—other places, 5.

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CASES OF OVARIOTOMY.

By G. Kimball, M.D., of Lowell, Mass.

[Communicated for the Boston Medical and Surgical Journal.—Continued from p. 452.]

Case VI.—Mrs. C.——, of Worcester, twenty-seven years of age, married nine years, and had borne nine children; of excellent constitution, and always enjoying good health till three years since, when she noticed an enlargement on the left side of the abdomen.

Upon applying to her physician, Dr. A. L. Hobart, she was informed that her disease was of ovarian origin, and that medical treatment would avail little or nothing in the way of giving relief. He also suggested, at the same time, that in his belief the only means of cure was *extirpation.* The nature of the operation, as well as the chances of surviving it, having been fairly stated, the patient, after a few days deliberation, concluded to submit to it.

In pursuance of a request from Dr. Hobart, coupled with a statement of the above-named facts, I visited his patient on the 19th of December, 1863. An examination of the case showed that it was manifestly one of ovarian tumor, and probably a single cyst; that although of large size, it had not yet seriously impaired the system, and that in every external appearance, it was a proper case for an operation.

All preliminary arrangements having been previously attended to, the operation was accordingly performed the same day—in the presence of Drs. Hobart, Sargent, Bates, and other members of the profession in Worcester.

The tumor being found free from adhesions, its removal was effected without difficulty, and in a manner in all respects like what has been already given in the case of the young lady in Plymouth (Case No. III.), and published in the Boston Medical Journal of last month. The following communication from Dr. Hobart will be reckoned as sufficiently full and explicit, as to the subsequent history of this case:—

"For one week after the operation the pulse of our patient was uniformly 100—hard and wiry; after that time it came down at the rate of two per day, till it fell to seventy.

"I kept her on water, then gruels, then broth, and finally on bread and meat till well. To give rest and comfort, I dosed her freely with morphine; and, as a peculiarity (and what I believe to be an improvement), I *gave no laxative*, but left the bowels to take care of themselves, which they did perfectly; and passed the first fæcal matter, quietly, easily, and naturally, at the end of twenty-five days, when all was well.

"I kept her in bed five weeks; but I think she might have risen sooner. In seven weeks she walked the streets, and attended church; from that time she has done her own work (I mean that of her own family), with all the comfort of former years. She tells me she never in her life felt stronger or firmer than now, and in all respects her health is as perfect as possible."

MENSTRUATION AND ITS CONNECTION WITH UTERO-GESTATION.

By Amos Nourse, M.D., Bath, Maine.

[Communicated for the Boston Medical and Surgical Journal.]

Until recently the subject of menstruation, though much discussed, has been but little understood. The discovery that it occurs simultaneously, or nearly so, with the disengagement from the ovary of a mature ovum, advances us at least one step in knowledge, and may lead, if properly followed up, to a pretty definite comprehension both of its relations and object. Indeed, in the opinion of some physiologists, it has already done so—they regarding it as fully proved that ovulation and menstruation are absolutely identical—part and parcel of the same process—the discharge of a mature ovum being the actual function, while the bloody discharge from the uterus is but the outward sign or manifestation. And the analogy of nature is invoked to prove that the season of menstruation in the human female corresponds entirely to that of heat in other animals.

To this doctrine, thus broadly stated, I have never been able to yield my assent. It seems to me to contradict established facts. If it were true, the sexual passion of the human female should be strongest while the menstrual flow is upon her; and who does not know the fact to be directly otherwise?

Then, too, in all our domestic animals, copulation, in order to be effective, must be had during the heat; and so, if the analogy insisted on is to be trusted, there is not an individual existing in this wide world, who was not begotten in that season of uncleanness, when women instinctively shrink from contact!

No wonder that the argument from analogy leads us here to such absurd conclusions, for it has no solid substratum to rest upon. If it were apparent, or could be proved, that the phenomena connected with generation in man and other animals were entirely analogous so far as known, that to be sure would afford a presumption more or less strong in favor of identity in those concealed from view. But there is no such general agreement—far from it. In the animals we are acquainted with, not only is the season of heat the only time when the overtures of the male meet a gracious reception, but, at all other times, any advances on his part are sure to be very significantly, if not spitefully, repelled. And, if intercourse, under such circumstances, is forced upon the female, it is never found to be effective.

Again, indications of sexual passion are never witnessed in animals during the pregnant condition. How entirely different in the human species, I need not say. Now, in view of such diversities, and even contrarieties, who does not see that any attempt to reason from analogy, so far from enlightening, can only tend to mislead?

In considering and discussing the subject of menstruation, we are apt, consciously or unconsciously, to take it for granted that it has something to do in effecting fecundation. But to my mind, such an assumption is wholly gratuitous. That menstruation gives indication of a *capacity for impregnation*, we have abundant proof, both negative and positive. But that it exerts even the smallest agency in accomplishing the fecundating act, has never yet been proved, nor, as I think, rendered even probable.

The all-important functions of the uterus are, so far as known, to give lodgment to the embryo—to furnish pabulum for its growth and development—and, at a proper time, to 'expel it. These all, it will be perceived, have relation, not to conception, but to utero-gestation. Is or is not the function of menstruation subsidiary to the same process? We shall see.

If we glance for a moment at the successive steps in the process of reproduction, two things can hardly fail to attract our notice. One is the remarkable, and almost intelligent sympathy felt and expressed by and between the organs concerned; and the other, the wonderful changes, both in dimensions and structure, which the uterus is made to undergo, preparatory to, and in the performance of, the special functions which the pregnant condition devolves upon it. And these two phenomena, if properly considered, furnish, in my judgment, a key to the mystery we are endeavoring to solve.

Dr. Dalton informs us that no sooner is the generative process commenced, than the lining membrane of the uterus assumes a changed, and altogether peculiar structure, fitting it for imparting to the embryo the nourishment it requires. And Dr. Janser, on carefully inspecting the uterus of a girl murdered four days after menstruation, found the structure and appearance of its mucous surface to be precisely such as, according to Dr. Dalton, belongs to incipient pregnancy. To quote his own words, "it results," he says, "from this observation that the mucous membrane of the uterus presents, during menstruation, characters analogous to those which exist during gestation."

Now how comes it about that this remarkable change of structure, wrought out once a month in and by the process of menstruation, should constantly occur in the non-pregnant state, as well as when conception has taken place?

If we consider well the circumstances under which it occurs, and keep in mind, too, how continually the action of one organ in the sexual system is influenced, and even controlled, by the state and condition of another, the change in question will cease to be the subject of marvel, and the wonder will be rather that the why and the wherefore have so long been overlooked.

Why is it that, so soon as the uterus has taken into its custody and maintenance a vivified germ, the mamma proceeds at once to take upon itself a new and peculiar action preparatory to the new function it instinctively feels it is about to be called upon to perform, viz., that of lactation?

How is it, too, that, when the process of utero-gestation is approaching its natural termination, the structure of the cervix uteri, of the vagina, of the external labia, and even of the perinæum, becomes so changed as to enable them to bear with impunity the impending strain that would otherwise prove fatal to their integrity? In both cases the organs concerned almost seem to be endowed, not only with intelligence, but with forethought. Certain things, they perceive, are taking place in their associate organs, the result of which is to be that a new and laborious duty will shortly be thrust upon them, and they proceed to prepare for it.

In like manner, when the ovarium is maturing a germ, the nucleus of an embryo that is to be, the uterus takes note of the fact, and recognizes in it the commencement of a process in which she is to play a most important part. True it is, as *we* happen to know, that all this labor on the part of the ovary may go for nothing, and the product become effete; but this the uterus does not know—how should it? It can take cognizance only of what transpires in the system to which it belongs, and of which it forms a part. And, so far as the work of that system is concerned, the embryo is already perfected, when the germ is fully matured. As soon, therefore, as this process is nearly completed, the uterus feels herself called upon to prepare for the reception and nutrition of the product. Whether or not the anticipated event is destined to be realized, time and chance must determine. But she has no knowledge of or control over that contingency. The ovary, she knows, is engaged, seriously and in earnest, in the great function of reproduction, the special office for which nature formed and fashioned it; and she doubts not, has no occasion to doubt, of its success in the performance of it. It is her business, therefore, in every case in which a mature and perfect ovum is being elaborated, to prepare for its reception, in utter disregard of the question of fecundation, which she could not settle if she would. She does thus prepare herself; and the process in and through which the requisite change of structure is effected, we call menstruation. It has nothing to do, if I judge rightly, either in promoting or preventing the fecundating act, but is simply a preparation of the uterus for a fitting discharge of the new duties which prospective utero-gestation is about to impose.

This view of the subject gives to menstruation an intelligible object and office. How it is that the bloody discharge becomes instrumental in effecting the contemplated change of structure, or why it should be regularly and constantly incidental to the process, I pretend not to understand, and shall not attempt to explain. It is the *result* alone of menstruation that I have to deal with. And that result, according to Dr. Janser, is a change of organization in the mucous lining of the uterus, precisely similar to that which belongs to the early stage of utero-gestation.

Now, should this asserted identity prove, after all, to be purely imaginary, I shall perhaps have little to say in defence of the views I have here submitted. But, should future observations confirm the truth of Janser's statement, and the appearances described by him be found uniformly to attend the menstrual process, then I see not how the conclusion I have arrived at can well be avoided.

Bath, June 22d, 1864.

SARATOGA SPRINGS.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—Now is the time for physicians to send their "chronic cases" to Saratoga. Never has the village been in a better condition to receive them, than at present. Extensive improvements have been made in nearly all the large hotels, and private boarding-houses have been enlarged and improved, so that our capacity for accommodating boarders has been increased nearly one quarter since last season.

Invalids have been coming in since May. Dyspepsia, hypochondria, and most of the nervous diseases, are well represented. Not a symptom is wanting. Great numbers of scrofulous patients visit us, especially from the New England States; together with patients affected with the different kinds of skin diseases, rheumatism, urinary diseases, and "miserable chronic cases," from all parts of the country. Now, Gentlemen Editors, strange as it may appear, most of these invalids are improved by a judicious use of our mineral water, and many *entirely recover.*

No doubt our fine air and healthful climate contribute essentially to these results, as well as relief from home cares and business.

Yet the effect of our mineral waters on these cases is most decidedly alterative and tonic.

These are gently or strongly cathartic, as you desire; they never prostrate, and work upon the secretions with great rapidity.

The first, and almost immediate results, are improved appetite, good digestion, better assimilation, good sleep, and increased strength.

Congress water, as usual, is drank freely as a beverage and as a pleasant cathartic, but most of our invalids drink Empire water, finding it more generally admissible, and more certain in its effects.

This spring has become very popular, and the greatly increasing demand for the water has obliged the Company to enlarge their facilities for bottling. I understand that large and commodious buildings for this purpose are to be erected this season. This is the great iodine spring, and can be used freely in pulmonary diseases. The revenue tax for the last month was $551.30, being over $150 more than that of the Congress, for the same month. This will give you some idea of the amount of sales.

We have the promise of a prosperous season. The number of arrivals so far exceeds that of last year to this date.

Truly yours, S. E. Whiting.

Saratoga Springs, July 1, 1864.

ON THE COMPARATIVE VALUE OF SULPHURIC ETHER AND AMMONIA AND CHLORIC ETHER AND AMMONIA AS ANTISPASMODICS IN TYPHOID FEVER.

By Henry Robinson, M.D., M.R.C.P., Lond., Consulting Physician to the Southampton Dispensary.

To record, by any given treatment, a single case of fever would scarcely merit a space in a medical journal; but when an opportunity offers itself for testing the therapeutic value of two remedial agents, such as sulphuric ether, and chloric ether or spirit of chloroform, the medicinal properties of which are so nearly allied to each other, the result may be worthy of attention.

A gentleman about twenty years of age contracted typhoid fever, which on or about the fourteenth day presented very unfavorable symptoms, and I was requested to meet in consultation the gentleman who was in attendance. I found the lips, teeth, and tongue thickly incrusted with black sordes; pulse 120; skin hot and dry; rose spots over the chest, &c.; great intolerance of sound; delirium, but partial sensibility at times, though he was unable to articulate distinctly. No tenderness was evinced on pressure being made over the right iliac fossa or other parts of the abdomen. The motion which had passed the previous night presented a reddish color, and was somewhat indurated; and the urine gave a lateritious deposit on standing. Being informed that wine had caused very great excitement, and observing a tendency to subsultus tendinum, we agreed to give chloric ether in combination with carbonate of ammonia.

Towards evening the unfavorable symptoms were more pronounced, and I was again requested to see the patient; but my colleague in the case could not make it convenient to attend. Wishing to know the effect produced by the mixture ordered in the morning, I administered a dose of it myself; and, finding no mitigation of the symptoms, resolved to try the effect of wine, which, though cautiously administered, produced so much excitement that it could not be continued with safety. I then gave ammonia and chloroform, omitting the spirit contained in the so-called chloric ether, but without effect; and the tetanic spasms had reached their acme. Involuntary evacuations took place, and the pulse was too rapid to be counted; there was total insensibility to those around him; violent convulsive movements, especially of the right arm, which was contracted upon the chest, and one leg was similarly affected; while the jaws were spasmodically closed. I then ordered a mixture of sulphuric ether and carbonate of ammonia, in the same proportion as the chloric ether and ammonia; and the moment the muscles of the jaw had relaxed sufficiently to admit a teaspoon, the mixture was administered in divided doses, and immediate effect was produced, as shown by the general tranquillity throughout the system. The convulsive movements returned, however, at short intervals; and some time was lost by the locking of the teeth, but this was ultimately overcome by passing a bottle containing chloroform under the nose of the patient, and when the spasm ralaxed the mixture was introduced, care being taken not to over-stimulate. Cold applications to the shaved head served to regulate the stimulating effects of the medicine; while ice, beef-tea, and beef-essence, were given between each dose of the medicine.

In such a case it was necessary to stand by the bedside during the night, and to administer the remedies chiefly with my own hands; but early in the morning I had the satisfaction of seeing the patient tranquil.

Not being convinced that so great a difference could exist between sulphuric ether and chloric ether or chloroform in arresting tetanic convulsions, I made one or two more trials of the chloric ether and ammonia, but no effect was produced by it.

It may be requisite to state that I found the addition of ipecacuanha wine, in the dose of three to five drops, materially assist in removing the sordes and promoting perspiration. We cannot, I believe, assign any chemical action to ammonia, sulphuric ether, and ipecacuanha, in removing the morbid matter of typhoid from the blood; the action must therefore be physiological. I have on a former occasion pointed out the value of ipecacuanha as a febrifuge in combination with the mixed nitric and nitrous acids in typhoid, but the action of these acids is chemical as well as physiological; they cannot, however, be given when subsultus tendinum or tetanic spasms are present.

It is necessary perhaps to mention that the patient showed the first signs of sensibility by calling for water, which the nurse gave him in considerable quantity; and when I entered the room, after being absent for a few hours, he craved for more water, though unable to swallow it when put to his mouth. I at last satisfied his demand by adding a little ipecacuanha wine to a glass of water, and one tablespoonful of it sufficed to appease thirst.

Recovery progressed as rapidly as nature could allow, and the contracted arm and leg were restored by embrocations, sponging, &c. —*London Lancet.*

STATISTICS OF POPULATION.—FACTS FROM THE CENSUS OF 1860.

THE *Journal of Commerce* furnishes some valuable facts from the forthcoming volume of the Census Report. The introduction to the volume contains the summing up of statistical results, for which the country is indebted to the steadfast labors of Mr. Kennedy, the Superintendent of the Census Bureau. These results bring before the people of the country a great many remarkable facts, some of which we notice.

The proportion of the numbers of the two sexes is different in this country from Europe. In Great Britain and Ireland there are 877,000 more females than males, in a population of 29,000,000, while in the United States, in a population of 31,000,000, there is an excess of 730,000 males over females. But this excess is not uniform in all parts of the country. Thus Massachusetts has 37,600 more females than males, while Illinois has 92,000 more males than females. California has 67,000 more males than females; Michigan has 40,000, Texas 36,000, Wisconsin 43,000; while in Colorado the proportion of men to women is twenty to one. This is, doubtless, the result of emigration. In Utah, notwithstanding polygamy, the numbers are about equal; in New York the females are a little more numerous; in Pennsylvania the males are a few more than the females.

On the subject of immigration the statistics are valuable and suggestive. The following is nearly the exact immigration for the three census periods:—

In the ten years previous to June 1, 1840	552,000
" " " 1850	1,558,300
" " " 1860	2,707,624

The largest number of emigrants arriving here are between 20 and 25 years of age. Over twenty per cent. of the whole immigration is of persons of this age. Fourteen per cent. are between 15 and 20, sixteen per cent. between 25 and 30; seven per cent. are children under 5. A most interesting table has been compiled by Mr. Kennedy, showing the occupation of the immigrants for each ten years from 1820 to 1860. We take the total, covering the whole period:—

OCCUPATION OF PASSENGERS ARRIVING IN THE UNITED STATES FROM FOREIGN COUNTRIES DURING THE FORTY-ONE YEARS ENDING WITH 1860.

Occupation.	1820 to 1860.	Occupation.	1820 to 1860.
Merchants	231,852	Artists	2,490
Farmers	764,837	Teachers	1,528
Mechanics	407,524	Musicians	729
Mariners	29,484	Printers	705
Miners	39,967	Painters	647
Laborers	872,317	Masons	2,310
Shoemakers	3,474	Hatters	256
Tailors	3,634	Manufacturers	3,120
Seamstresses and Milliners	5,246	Millers	631
Actors	588	Butchers	945
Weavers and spinners,	11,557	Bakers	1,272
Clergymen	4,326	Servants	49,494
Clerks	3,882	Other occupations	26,206
Lawyers	2,676	Not stated	2,978,599
Physicians	7,109		
Engineers	2,016	Total	5,459,421

The preponderance of "laborers" is very great. Farmers are next in number; then mechanics, merchants, &c. The table of nativity of population presents a subject of peculiar interest. Here is the grand total:—

	Census of 1860.	Census of 1850.
Born in the United States	23,301,403	17,737,568
Born in foreign countries	4,136,175	2.210,839
Birthplace not stated	51,883	39,154
Total free population	27,489,461	19,987,571

The different races and nations in the United States are represented as follows:—

	Census of 1860.	Census of 1850.	Proportions in 1860.
Ireland	1,611,304	961,719	38.94
Germany	1,301,136	573,225	31.45
England	431,692	278,675	10.44
British America	249,970	147,700	6.05
France	109,870	54,069	2.66
Scotland	168,518	70,550	2.63
Switzerland	58,327	13,358	1.29
Wales	45,763	29,868	1.11
Norway	43,995	12,678	1.07
China	35,565	758	0.86
Holland	28,281	9,848	0.68
Mexico	27.466	13,317	0.66
Sweden	18,625	3,559	0.45
Italy	10,518	3,645	0.26
Other countries	60,145	37,870	1.45
Total foreign born	4,136,175	2,210,839	100.00

Many readers will be surprised at the closeness with which the

German numbers rival the Irish. The distribution of the foreign element is worthy of careful notice. By the following table it seems that North Carolina exceeds all other States as a native-born American population. Arkansas is next. California has the largest proportion of foreign-born population, owing, doubtless, to the fact of its late acquisition, with a large Mexican population then in it. Wisconsin is next in order. Minnesota next.

PERCENTAGE OF THE NATIVE AND FOREIGN POPULATION IN 1860.

States and Territories.	Total Natives.	Total Foreign.	English.	Irish.	German.
Alabama	98,72	1,28	0,12	0,59	0,27
Arkansas	99,14	0,86	0,09	0,30	0,26
California	52,02	47,98	4,00	10,85	7,10
Connecticut	82,46	17,54	1,93	12,05	1,85
Delaware	91,82	8,18	1,41	5,41	1,13
Florida	97,64	2,36	0,23	0,60	0,34
Georgia	98,90	1,10	0,11	0,62	0,23
Illinois	81,03	18,97	2,44	5,12	7,65
Indiana	91,25	8,75	0,69	1,81	14,94
Iowa	84,29	15,71	1,71	4,16	5,71
Kansas	88,16	11,84	1,31	3,63	4,03
Kentucky	94,83	5,17	0,39	1,93	2,36
Louisiana	88,56	11,44	0,56	3,98	3,48
Maine	94,04	5,96	0,43	2,44	0,06
Maryland	88,72	11,28	0,62	3,62	6,39
Massachusetts	78,87	21,13	1,94	15,07	0,81
Michigan	80,09	19,91	3,44	4,01	5,18
Minnesota	66,22	33,78	1,99	7,37	10,59
Mississippi	98,92	1,08	0,11	0,49	0.25
Missouri	86,41	13,59	0.85	3,68	7,50
New Hampshire	93,58	6,42	0,70	3,91	0,13
New Jersey	81,73	18,27	2,36	9,23	5,03
New York	74,27	25,73	2,73	12,84	6,61
North Carolina	99,67	0,33	0.07	0,09	0,08
Ohio	85,97	14,03	1,40	3,28	7,19
Oregon	90,24	9,76	1,32	2,41	2,06
Pennsylvania	85,19	14,81	1,60	6,95	4,74
Rhode Island	78,58	21,42	3,64	14,48	0,47
South Carolina	98,58	1,42	0,11	0,70	0.38
Tennessee	98.09	1,91	0,18	1,12	0,35
Texas	92,81	7,19	0,28	0,58	3,40
Vermont	89,61	10,39	0,52	4,28	0,07
Virginia	97,81	2,19	0,26	1,03	0,66
Wisconsin	64,31	35,69	3,94	6,44	15 97
District of Columbia	83,37	16,63	1,37	9,66	4,33
Territories	83,89	16,11	4,45	2,31	1,86
Total in the United States	86,85	13,15	1,37	5,12	4,14

The following is Mr. Kennedy's condensation of certain facts derived from the census table:—

I. The largest number of foreigners reside in the following States in their order, to wit: New York, Pennsylvania, Ohio, Illinois, Wisconsin, Massachusetts. It will be observed that the total population also follows the same order, as regards the first four States, indicating a similarity of composition of native and foreign.

II. Foreigners reside in the least numbers in North Carolina, Florida, Arkansas, Oregon, Mississippi, Delaware.

III. *The greatest foreign increase*, from 1850 to 1860, has been in New York, Illinois, Wisconsin, Pennsylvania, California, Ohio.

IV. *The least foreign increase*, from 1850 to 1860, has been in Vermont, Florida, North Carolina, South Carolina, Arkansas.

V. The greatest number of English reside in the States of New York, Pennsylvania, Illinois, Ohio, Wisconsin, Michigan.

VI. The least number of English reside in Florida, Arkansas, Oregon, North Carolina, South Carolina, Mississippi.

VII. The greatest number of Irish reside in New York, Pennsylvania, Massachusetts, Illinois, Ohio, New Jersey.

VIII. The smallest number of Irish reside in Florida, North Carolina, Oregon, Arkansas, Texas, Kansas.

IX. The greatest number of Germans reside in New York, Ohio, Pennsylvania, Illinois, Wisconsin, Missouri.

X. The least number of Germans reside in Vermont, Maine, New Hampshire, Florida, North Carolina, Rhode Island.

XI. It will further be found that 3,582,999—that is, 86.60 per cent. of the whole number of foreign-born—were inhabitants of the free States, and 553,176, or only 13.40 per cent., of the slaveholding States. In 1850, the corresponding percentages were 88.94 and 11.06, respectively, or as 8 to 1. In other words, for each white immigrant located in the slaveholding States, eight have settled in the free States.

XII. The decennial increase of the foreign population from 1850 to 1860 has been 87.1 per cent., being nearly a doubling of numbers; in some States more, and in others less. In round numbers, the State of New York has a million of foreign residents, which is a fourth part of all in the United States, and also a fourth of the total population of the State; but, on an average of all the States, the number of foreigners is about one eighth part of the whole population.—*Hunt's Merchants' Magazine.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

June 13th.—*Conical Stump due to the natural growth of the Humerus after an Amputation performed in childhood. Neuromatous condition of the Nerves.*—Dr. Hodges showed the specimen.

J. H., aged 18, had his right arm amputated above the elbow when 9 years old. The stump healed rapidly, and for two years was perfectly round and smooth, without any projection of the bone. The cicatrix is linear and distinct at the present day, and the integument generally is healthy and as movable as elsewhere. The amputation was apparently a flap operation. During the last seven years the end of the humerus has been growing more and more prominent, and now projects in one of the flaps to the extent of an inch, the protrusion in no way implicating the cicatrix. The integument has grown thin and shiny over the extremity of the bone, where there is an obvious bursa, and threatens to be perforated. The stump is the seat of severe neuralgia, and what proved to be neuromatous tumors could be easily felt before the operation. This consisted in the removal of a portion of the integument and 2½ inches of the bone. On dissection, all the nerves were found to terminate in large bulbous tumors, and the bursa over the end of the bone contained a great number of minute loose bodies, similar to those frequently found in synovial cavities. The bone itself was healthy, and gradually tapered to a point. Twenty days after the operation the patient left the Hospital for his home in New Hampshire, the wound nearly healed, and without any recurrence of the neuralgia.

Dr. Hodges referred to a number of similar cases collected in his Essay on the Excision of Joints. Its history, the well-formed stump, healthy cicatrix and absence of all retraction of the soft parts, combined to show that the deformity in this instance was due to a growth of bone continuous with the growth of the boy's body, such as has been frequently noticed to follow amputations performed in childhood, and not the ordinary conical stump occasionally observed after amputations with insufficient flap.

June 13th.—*Excision of the Knee-joint for Deformity.*—Dr. Hodges showed the specimen.

M. C., aged 15, when 3 years old sprained his knee, but not sufficiently to prevent its continued use in walking. Four years later he was laid up with an acute inflammation of the joint, due, as he thinks, to a cold caught from exposure in swimming. He has not been able to walk upon the limb since. The knee is fixed at an angle of 110°, is painful and sensitive on pressure, considerably enlarged and distorted. A sinus, connecting apparently with the articulation, opens on the inside of the leg. The general health of the patient being good, a consultation advised excision of the articulation.

A transverse incision was used to expose the joint. Considerable force was required to break down the old false anchylosis which existed. The patella was consolidated with the femur and removed with the condyles. There was but a limited amount of active disease. About two inches of bone were removed, and the diseased synovial membrane cut away with the scissors. The hamstring tendons were divided, and the incision carried well down upon the sides to permit a free escape of the subsequent suppuration.

The rigidity of the nerve and vessels in the popliteal space rendered the straightening of the limb a matter of considerable difficulty, even after so large an amount of bone had been sacrificed. During the first 48 hours following the excision, there was also a strong tendency to displacement, which was overcome by straps and firm compression; but now, four weeks after the operation, there is some stiffening of the bones, the suppuration has diminished, and the limb is in a promising condition.

June 13th.—*Omental Hernia.*—Dr. Hodges exhibited the specimen, which was from a patient of Dr. J. H. Blake; a fleshy but healthy man, 59 years old, who, eleven months since, detected a small, painful tumor, occurring without assignable cause, in the left groin. That it was a hernia, composed exclusively of omentum, was obvious on examination. The pain and inflammation of which it has since been continually the seat, occasionally confining him to his bed, and disqualifying him for even light and easy labor, led the patient to seek relief in an operation. This was performed in the usual manner, and the mass of omentum, equal in size to a pullet's egg, cut off below a single ligature tied around it at the neck of the sac. The operation was performed June 8th, and complete recovery has followed.

June 27th.—*Suicide by cutting the Throat.*—Dr. Cheever reported the case.

The patient was a man, 33 years old, a tailor, who cut his throat with a razor, while laboring under insanity. He was brought to the City Hospital three hours afterwards, in a state of great prostration from hæmorrhage. An attempt was made to bring on reaction by injecting stimulants into the stomach, the œsophagus having been divided by the razor. Brandy was also administered by the rectum, and tracheotomy was done by Dr. C. The patient's breathing was much relieved, but he died, eighteen hours after his entrance into the hospital.

On examination of the wounded parts, *post-mortem*, it was found that the thyroid cartilage was cut through on both sides, just above the vocal chords, but on one side lower than the other The pharynx also was opened. The carotids were uncut, the hæmorrhage having been from the superior thyroid artery.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, JULY 21, 1864.

The Trial of La Pommerais.—Many of our readers have undoubtedly noticed the reports of the recent trial of La Pommerais in Paris for the murder of his mistress, and the later account of his conviction and execution. The history of this remarkable case is briefly as follows:—The accused was a homœopathic practitioner. He had induced his victim, Madame de Pauw, to obtain insurance upon her life to the amount of £22;000, and to assign the assurances to himself. Some time previously to the event we are recording, he bought three grammes of digitaline, of which fifteen centigrammes only were found remaining in his possession, and the scientific men employed by the government reported as the result of their experiments, which we shall proceed to state, their conviction that the deceased had been poisoned by this substance. It is well known that there are several alkaloids capable of producing most fatal and rapid effects upon the human economy, which, in the present state at least of chemical science, cannot be recognized by chemical tests. It becomes a question of grave importance, therefore, how far evidence resting upon physiological experiments alone shall be admitted in medico-legal cases. Hitherto it has been allowed only in confirmation of other proof, but in the present case more weight was attached to it in the French court of justice than our knowledge of the physiological action of organic substances upon animal life would seem to authorize. There can be no question as to the justice of the decision against La Pommerais, but it seems to us that it would be very dangerous to infer from the scientific evidence alone, however brilliantly and skilfully prepared, that digitaline was the poison employed by him. The following account of the trial is taken from the excellent report published in the London *Medical Times and Gazette.*

"It was on the 17th of November last that M. Paul Blachez was called to attend Madame de Pauw. On his arrival, he found her in a dying state. She was apparently unconscious, at least it was impossible to elicit any sign from her; her body was covered with an abundant cold sweat; there was great disturbance of the circulation, the pulse being irregular and intermitting. She cried out continually, in a weak voice, 'Oh, my head! oh, my head!" She retched several times, but whilst he was with her did not vomit freely. She then fainted so completely that her pulse entirely disappeared, a whitish froth escaped from her mouth, and she died. He at the time attributed her death to the rupture of an aneurism. * * * *

"Thirteen days after death, her body was exhumed under the superintendence of M. Tardieu, Professor of Legal Medicine and Dean of the Faculty of Medicine in Paris. The body and external organs were in a state of perfect preservation—so perfect that had any lesions, the result of previous disease, been present, they would have been at once recognized. The results of the autopsy were entirely negative. The heart was unaltered in size, and its valves acted perfectly. The blood was semi-coagulated, but there was an absence of clots. The lining membrane of the stomach was perfectly healthy; that of the intestines presented some sanguineous infiltrations, but they were few in number. The deceased was advanced seven or eight weeks in pregnancy. The chemical analysis, which was conducted by M. Roussin, was made by obtaining alcoholic and watery extracts of a portion of the stomach and intestines. The solid residue exhibited no trace of mineral poison, neither was any organic poison which could be isolated obtained from the extracts.

"Shavings of the floor of the apartment on which the deceased had vomited were also procured, and for the purpose of comparison shavings from the floor of a different part of the room. From the former sixteen grammes and a half of alcoholic extract were obtained. This had a brown color, a peculiar rancid and oily odor, and a very bitter taste. On incineration it left no metallic residue; it was precipitated abundantly by tannic acid; the addition of sulphuric acid turned it of a reddish purple color, and hydrochloric acid produced a green tint. The extract of the shavings which were unsoiled by the vomited matters had an aspect and odor closely resembling the preceding, but it had no bitter taste, it was not precipitated by tannic acid, and only slightly colored by sulphuric and hydrochloric acids; the tints struck by these acids were entirely different from those produced in the former extract.

"It was clear that this result proved nothing as to the existence of poison. The change in color produced by sulphuric acid, and the precipitation by tannic acid, are reactions common to many organic matters, and, as was observed by M. Hébert, the green color which followed the addition of hydrochloric acid would have been a more important indication had the chlorophyll of the vegetables (cauliflower and sorrel) which she had eaten, and the green coloring matter of the bile, been previously removed. In the failure of their chemical investigation, therefore, the experts had recourse to physiological experiment.

"The first trial was made with the extract obtained from the shavings of the floor on which deceased had vomited. At five minutes past one a dog was inoculated with five grammes of this extract, introduced by two incisions on the inner surface of the thighs. At half past three the animal vomited thrice. The vomited matters were glairy and bilious. The pulse, which at the commencement of the experiment was 110, had fallen to 94; it was irregular and intermittent. The beat of the heart was irregular and intermittent, at times appearing to cease suddenly, and then becoming rapid. The respirations were slightly intermittent. At half past four the heart-beats fell to 76, and the animal again vomited. At eight in the evening, it could stand with difficulty. The slightest movement appeared painful, and provoked vomiting. The heart-beats were still irregular, and 68 in the minute. At eight the following morning the animal was cold, but sensible. The heart-beats were less strong, and had fallen to 40. Their irregularity and intermittence were very remarkable. Respiration was jerking and intermitting. The animal died at eleven o'clock, apparently without pain. There was no coma. The examination of the body was made two hours after death. The ventricles of the heart were markedly contracted, although the auricles were dilated. All the cavities of the heart were filled with black, thick, and partly coagulated blood. On removing the pericardium, some elevations of a vivid red color were observed on the surface of the heart near the apex.

"2d Experiment.—Two grammes of the same extract were administered by the mouth to a rabbit. Great irregularity of the heart's action ensued. The beats fell to 41 in a minute. The animal died in two hours and three quarters from the administration of the extract. The cardiac auricles were found dilated, the ventricles contracted, the latter strongly contrasted by their blackish color with the rest of the organ. The interventricular space was remarkably depressed. The apex of the heart was of a vivid red color, and the walls presented several red elevated spots.

"The third experiment was one made for the sake of comparison with the extract obtained from the shavings of the floor, on which the vomited matters had not fallen. Four grammes of this extract were administered to a rabbit. It did not vomit, nor was it in the least incommoded, and two days afterwards it continued in perfect health.

"The fourth experiment was made with the alcoholic and aqueous extracts obtained from the stomach and intestines of the deceased. Five grammes of a mixture composed of equal parts of these extracts were introduced into an incision made on the inner surface of the thigh of an adult vigorous dog. At three o'clock the animal's pulse beat 102 in a minute. At half past four it seemed depressed, anxious, it respired with difficulty, and its pulse had fallen to 86, and the heart's action was irregular and intermittent, but less so than in the case of the dog experimented on with the vomited matters. The animal vomited twice. At eight in the evening the pulse had fallen to 55, and was manifestly irregular and intermittent. Respiration seemed difficult. The animal frequently changed its position and uttered half stifled cries; it retained its intelligence. The following day, at half past eight in the morning, the beat of the heart had risen to 70 pulsations in the minute; the general condition of the animal was improved, and it ultimately recovered.

"The fifth experiment was also made with the extracts of the viscera. Four grammes were administered to a rabbit, which died in a few minutes. The experimenters thought that its rapid death was owing to some accidental complication—perhaps syncope—having hastened the action of the poison.

"The sixth experiment was performed on three frogs. After having laid bare the heart in each, and observed that the pulsations in the three were perfectly equal, the experiment proceeded as follows:—

"1. The first frog was left in a normal condition, care only being taken to preserve the humidity of the heart.

"2. The second frog. Six drops of a solution containing one centigramme of digitaline in six grammes of water were injected under the skin of the belly.

3. The third frog. Fifty centigrammes of the extract made from the shavings of the floor on which the vomited matters had been spilt were injected under the skin of the belly.

"The following variations in the number and beats of the heart were observed in the three animals:—

Minutes.	No. 1. Pulsations.	No. 2. Pulsations.	No. 3. Pulsations.
After 6	42	20	26
" 10	40	16 irregular.	24 irregular.
" 20	40	15 id.	20 id.
" 28	38	0	12 very irregular.
" 31	36	0	0

This experiment was repeated several times with the same result.

"The experts relied on the first experiment as proof of the fact that the vomited matters contained poison. The third demonstrated that the poison did not previously exist in the floor of the room. The fourth was held to prove that the stomach and intestines of the deceased contained the same poison, but in less quantity than the vomited matter, the dog having recovered from its effects. The sixth experiment on the frogs was instituted to demonstrate the nature of the poison used. The experimenters did not consider it of the highest importance, but it corroborated the former ones. It pointed to that group of organic poisons which are known especially to affect the heart's action, and heightened the probability that death had been caused by digitaline. The report of M. Tardieu drew a comparison between the symptoms exhibited by the first dog and those noticed in the last illness of the deceased. In both there were repeated and violent vomitings, and rapid loss of power. In both the pulse was irregular and intermitting; in both the heart's action was tumultuous and irregular, apparently ceasing at times, until it was finally suppressed. The following were the conclusions of the report:—

"1. Madame de Pauw died from the effects of poison.

"2. The poison which killed her was one of those vegetable poisons which do not leave characteristic traces in the organs of the body, nor can they be isolated by chemical analysis. They reveal their presence by their effects, and are detected by their deadly action on living beings.

"3. We obtained from the vomited matters and the organs of deceased submitted to analysis a very energetic poisonous principle which, when administered to animals, produced analogous effects to those observed in Madame de Pauw, and killed them in the same manner.

"4. These effects and this action have a strong resemblance to those of digitaline, and without asserting it as a fact, there is a strong presumption that Madame de Pauw was killed by that agent.

"5. That deceased was not really ill before the day which preceded her death.

"6. The *post-mortem* examination proved that death was not caused by the effect of a fall, nor by an internal hæmorrhage, nor by an acute or chronic gastro-enteritis, nor by a perforation of the stomach, nor by any natural cause.

"We will only add that M. Tardieu's report is drawn up with marvellous clearness, minuteness, and perspicuity, and is a model in way of arrangement and execution for similar documents.

"We have now to examine the criticisms on the report of MM. Tardieu and Roussin, offered by M. Hébert, the expert employed for the defence. The first point noticed by M. Hébert was, that the unusual preservation of the body, as poisoning by any mineral substance was out of the question, did not favor the idea of poisoning. He next asserted that neither the chemical nor the physiological experiments made with the shavings on the floor on which the vomited matters had been spilt, were of any force. The reason for assigning no weight to the chemical experiments we have already noticed. The objections to the physiological experiments were the following:—The extract of the vomited matter contained organic matter in a state of decomposition, sufficient of itself to produce toxical effects. The dog in the first experiment exhibited a gradual and progressive retardation of the heart's action, and after death that organ was found in a state of contraction. There are two reasons for believing that death did not result from digitaline—the first, because MM. Bouley, Reynal, Delafond, Dupuy, and Stannius, have found that digitaline in small doses retards the heart's action, but accelerates it if given in considerable doses. Secondly, that in poisoning by digitaline the heart, instead of being contracted, is dilated and gorged with blood." *

"The evidence of MM. Claude Bernard, Vulpian, Bouley and Reynal was taken on the question raised by M. Hébert, whether, after poisoning by digitaline, the heart was contracted as asserted by the experts, or dilated as stated by M. Hébert. M. Claude Bernard stated, as the result of his experiments, that in the higher animals, when poisoned with digitaline, there is at first agitation, then, after some hours, death takes place suddenly, as if from syncope. A particular characteristic of poisoning by this substance is that immediately after death red arterialized blood continues to be poured into the left cavities of the heart, because respiration continues after the complete arrest of the cardiac pulsations. Death, therefore, occurs from the cessation of the heart's action, and at first the organ is dilated by the blood which continues to flow into its cavities. But cadaveric rigidity follows much more rapidly in the muscular structure of the heart than in the other muscles of the organism. Contraction of the ventricles, therefore, rapidly replaces the dilatation, and in the course of a very few minutes they empty themselves of the blood which has been poured into them. A quarter of an hour after death the state of contraction is clearly manifest, and the rigidity continues. In answer to questions put by M. Hébert, M. Claude Bernard said that there was nothing in the condition of the dog poisoned in the first experiment which appeared to him to contra-indicate the idea of poisoning by digitaline. But the experiment would have been more convincing had the autopsy been made a few minutes instead of two hours after death. In his experience there is often in poisoning by digitaline at first an acceleration of the heart's movements, but that finally retardation sets in, and continues to increase until complete arrest terminates life.

"M. Vulpian's evidence referred to the effect of digitaline on frogs. He dissented from the statement of Stannius that digitaline did not affect batrachian reptiles. On the contrary, he found that the action of digitaline was most powerful on frogs. When injected under the skin it produced in a few minutes manifest changes in the movements of the heart; the auricles begin to contract somewhat irregularly, but the movements of the ventricle are especially affected; they contract with great irregularity, certain points of the ventricle appearing to escape the general movement; at the same time the pulsations become slower and slower, and after some minutes the heart becomes motionless. The ventricle stops first and remains empty, pale, and contracted; the auricles continue for a short time to act, but too feebly to force the blood into the ventricle; they remain fully dilated after the contraction of the ventricle. There is also this peculiarity observed, that even after the arrest of the heart's action the frog will continue to leap about with but little less vivacity than in the normal condition. There are several other poisons which act in the same way as digitaline when introduced under the skin of the frog; these are, the poison of the toad and of the aquatic salamander, *Upas antiar*, alcoholic extract of *Tanghinia venenifera*, and watery and alcoholic extracts of the *Veratrum viride*. M. Vulpian concluded by stating that he had tried other vegetable poisons and tannin, and had never observed analogous phenomena.

"The experiments of MM. Bouley and Reynal had been made with digitaline on horses. They had never observed the cardiac ventricles contracted. On the contrary, the heart had always appeared flabby: but as the examinations were made five or six hours after death, this might have been due to the commencement of putrefaction, which takes place much more quickly in herbivora than in carnivora, especially after death by the vegetable poisons."

CANNIBALISM.—In Africa there are two kinds of cannibalism. The one is sacrificial, and is performed by the priests, whose office it is to eat a portion of the victim, whether man, goat or fowl. This custom, prevalent among many ancient nations, is still extant in many parts of North Guinea, especially in the Delta of the Niger.

The other is simply an action of *gourmandise.* A cannibal is not necessarily ferocious. He eats his fellow creatures, not because he hates them, but because he likes them. A craving for meat, to which the natives of these parts are subject, and for which, in all their dialects, there is a special term, may first have suggested the idea; but I am rather inclined to believe that it is a practical extension of the sacrificial ceremony. Neither the women nor the young men are allowed to touch the dainty; it is reserved by the patriarchs, and the head, which is supposed to contain a grand fetish, falls to the king.

Although the missionaries had mixed a great deal with the Fans, they told me that they had never got a clear confession of cannibalism from one of them, though they had "no more doubt that the Fans ate men than they had that they ate plantains." It was, however, never denied of the tribe, but only of themselves as individuals. Thus the natives of village A would deny stoutly that they were cannibals, but they would accuse the villagers of B. The villagers of B would deny the soft impeachment, and denounce the natives of A as cannibals of the most confirmed order. Similar answers had been returned to me by the Fan slaves whom I had met with among the Bush tribes of the Muni. They did not eat men, but the other people of their tribe did.

I resolved to exercise a little finesse in the investigation of this matter, and after I had passed the villages which had previously been inhabited by white men, I called a veteran cannibal to me and questioned him about the people beyond the mountains to the east. Did they eat men? Oh yes, they all ate men. And he ate men himself. As he volunteered this statement, he burst into a loud roar of laughter, in which we all joined very heartily. I asked him if man was good. He replied, with a rapturous gesture, that it was "like monkey, all fat." I then wished to learn the class of persons he had been in the habit of discussing. He said, only prisoners of war; that some of his friends were in the habit of eating witches condemned to death, but that for his part he did not think them wholesome. The best of it was that he thought I was a cannibal too; a belief which is universal among the bush tribes of Western Africa, and of which the slave trade has been the cause. I remember that when I was in the Camma country, a Bakeli slave, who had been brought down from the far interior, and who had never seen a white man before, squatted before me, with his great, round, prominent eyes on my face, and his mouth wide open. At last he heaved a gasp of wonder, crying, "and are these the men that eat us?"—*Winwood Reade's "Savage Africa."*

NEW HAMPSHIRE ASYLUM FOR THE INSANE.—From the last Annual Report of Dr. Bancroft, Superintendent of the Asylum, we learn that on the 1st of May, 1863, there were in the house 204 patients, of whom 94 were males, and 110 were females. There have been admitted since that time 105—56 males and 49 females—making in all who have enjoyed the benefits of the Asylum 309, namely, 150 males and 159 females. Sixty-nine have been discharged, of whom 38 were males and 31 one females. Twenty-nine males and 14 females have died. There are remaining in the Asylum on the 1st day of May, 1814, 217; of these 103 are males, and 114 are females. The largest number on any day was 219; the smallest number was 192.

There were 76 deaths in Providence during the month of June. The mortality of the first six months of the present year has been 35 greater than in 1863, and 104 greater than the average for nine years. During the last two months, it has not been greater than the average, taking into consideration the increase of population. Scarlatina still continues with considerable severity, and the number of deaths (42) during the first six months of this year is the same as during the whole year 1863.

Robert M. De Witt, of New York, has in press, and will publish in a few weeks, a new work on "Morbid Tumors," by Rudolf Virchow, Professor of Pathological Anatomy, &c., Berlin.

NOTICE.

It will be recollected that the subject of increasing the subscription price of the Journal was brought to the notice of its readers before the commencement of the 68th volume, at a time when many of the newspapers and other periodicals of the day were raising their prices. It was decided, however, that the old terms should be continued, but that the number of pages in the weekly issues would probably have to be reduced, either occasionally or constantly. The price was accordingly continued, but no reduction in the number of pages has since been made. The time has now arrived when it is impossible longer to avoid the adoption of one or the other of these plans; and of the two, an increase in price is the one, we think, most likely to be satisfactory. This also conforms to the plan adopted by other medical journals of the country, and to that publicly agreed upon by the publishers of weekly periodicals in this city. After the termination of the current subscription year of each subscriber, therefore, our subscription price will be $4 a year, and the same to all new subscribers after the 1st of August next, or the beginning of the 71st volume. We need not assure our readers that on our part we shall spare no effort to continue to make the Journal worthy of their support. New subscribers for the current year from February last, will be charged but $3.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, July 16th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	43	46	89
Ave. mortality of corresponding weeks for ten years, 1853—1863,	36.9	34.7	71.6
Average corrected to increased population	00	00	78.81
Death of persons above 90	0	1	1

Married,—In this city, 13th inst., Edward M. Skinner, M.D., to Miss Caroline M. Mair.—In Carlisle, Mass., 13th inst., H. C. Robbins, M.D., 1st Ass't Surg. 101st Ill. Vol. Inf'try, to Miss M. Lizzie Prescott, of Carlisle.

Deaths in Boston for the week ending Saturday noon, July 16th, 89. Males, 43—Females, 46.—Abscess, 1—accident, 4—disease of the brain, 5—burns, 2—cholera infantum, 8—consumption, 17—convulsions, 2—croup, 3—debility, 3—diarrhœa, 1—diphtheria, 2—dropsy, 3—dropsy of the brain, 1—drowned, 1—dysentery, 2—scarlet fever, 2—typhoid fever, 2—hæmorrhage, 1—malformation of the heart, 1—disease of the hip, 1—homicide, 1—infantile disease, 1—intemperance, 1—disease of the kidneys, 3—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 1—marasmus, 3—measles, 1—old age, 1—scirrhus, 1—scrofula, 1—smallpox, 2—suicide, 1—sunstroke, 1—syphilis, 1—ulcers, 1—unknown, 3.

Under 5 years of age, 40—between 5 and 20 years, 9—between 20 and 40 years, 16—between 40 and 60 years, 16—above 60 years, 8. Born in the United States, 56—Ireland, 24—other places, 9.

THE

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RHEUMATISM OF THE DIAPHRAGM—ITS PATHOGNOMONIC SYMPTOMS AND TREATMENT.

BY EDWIN NESBIT CHAPMAN, A.M., M.D., PROF. OF OBSTETRICS, &c. &c. IN THE LONG ISLAND COLLEGE HOSPITAL, BROOKLYN, N. Y.

[Communicated for the Boston Medical and Surgical Journal.]

THE rarity of rheumatism of the diaphragm, and the want of a proper description of its symptoms by writers, very few of whom allude to it, induces me to give my experience *in propria persona* of this most painful and formidable of diseases.

Before the attack, my general health was good, unless the appearance of boils at different times, rheumatic stiffness, occasionally, in the external, spinal muscles, and an increased hepatic secretion, as shown by a yellowness of the conjunctivæ, a sallowness of the skin and greenish-colored passages, might be considered as evidences to the contrary. Excepting in the slight form just indicated, I had never been troubled with the rheumatism.

On the afternoon of Tuesday, the 20th of October, of the last year, I rode in a hired carriage, so poorly furnished with springs that a shock was given, both when the wheels struck an inequality and in the rebound. At the time, from several of the severer jolts, I experienced a painful sensation in the lower portions of the chest on the right side; and. on returning home, I began to feel, almost immediately, down the front portion of the spine, darting, lancinating pains; that, starting just within the clavicle, seemed to spread downward with a wave-like motion. These pains, which were aggravated by movements of the trunk, becoming more severe in the evening, I took the precaution at bedtime, from an apprehension that evil consequences might flow from this location of the disease, of bathing my feet in warm water containing mustard, and taking eight grains of Dover's powder, and also of furnishing myself with morphine pills. In the early part of the night the pain steadily increased in intensity, forbidding sleep, and denying me ease or comfort in any position; and then, about midnight, the same sensations were felt extending forward from the spine along the diaphragm. The recumbent position could not now be tolerated, and, each moment, inspiration became more difficult, and attended with greater suffering. By 4 o'clock the struggle for breath was agonizing, and well nigh insupportable—respiration taking place, but imperfectly, by means of the upper ribs, the chest inflated, as in a full inspiration, by the spasmodically contracted diaphragm, and a sensation was experienced as though an infinite number of wires, extending from the margin of the ribs to the spine, were tightened to their utmost tension by a key. The lower part of the chest was immovably fixed, and the abdominal walls were hard, tense, and as inelastic as a board. In addition to the Dover's powder, I had taken a grain of morphine in divided doses, without producing the slightest effect; and, now, feeling that my brain was rapidly losing its equilibrium, from the effort at respiration and the anguish thus occasioned, I thought it was high time to have a clearer head, and steadier nerves to hold the helm, and steer the laboring ship through this terrible storm. I yielded myself, confidently, into the hands of my colleague Prof. Gilfillan, with the certainty that all would be done for me that professional skill could accomplish. The Doctor arriving a little before five o'clock, I told him that, from the location of the pain, and the peculiar symptoms attending it, the disease, in my opinion, was rheumatism of the diaphragm, and that, unless more powerful doses were given to relax the spasm, than I had hitherto taken, there could not but be great danger of congestion of the heart and lungs.

The doctor adopted my diagnosis, and kindly staid with me until the force of the disease was broken. He gave me ten grains of calomel, a quarter of a grain of morphine every hour, a teaspoonful of Hoffmann's anodyne, together with ten drops of chloroform every half hour, and ordered mustard plasters to the seat of the pain. After using, for a time, these prescriptions, each dose of which seemed to strike the points of constriction and spasm, a sense of relief began to be experienced, which, in three hours, was so marked that unconsciously I began to drop into a fitful sleep, a result too direct and prompt to be attributed to the morphine, of which only an additional half grain had been taken. Bolstered up in the sitting posture, I could now breathe gently without exciting spasm; but still the lower ribs were as immovably fixed, and the abdominal muscles as tense, as ever, and any effort to draw in the air more deeply, was checked by the same painful sensations experienced at first.

In the afternoon, when I was able to bear a more thorough examination, it was found that the vesicular murmur was scarcely audible in the lower portions of the lungs, and that there was a slight friction sound over the heart. Late in the evening, on attempting to urinate for the first time in several hours, a difficulty was experienced from an inability to force down, and during the night I had the same trouble in evacuating the bowels. The urine was slowly expelled by the contraction of the bladder, and the fæces by that of the intestines.

On the second day, the spasm of the diaphragm had relaxed, allowing the air to penetrate to the lower lobes of the lungs, and the ribs to move more freely in respiration. The friction sound over the heart had disappeared, and also much of the hardness in the epigastric and hypochondric regions; but still I had to retain the same position in bed, had scarcely more power in voiding urine or fæces, could not draw a deep inspiration, and panted from the slightest movements. I could not yawn or sneeze, and my voice was very feeble. It was seven days before I could lie on either side, eight before I could sleep on one pillow, and ten before I could draw a deep inspiration without exciting pain and a feeling of constriction. In a week's time I began to sit up, but the nervous debility was most remarkable—panting, rapid breathing from walking across the room, or even from the exertion of dressing, a feebleness of voice, like that from relaxation of the vocal cords, huskiness and almost complete aphonia following any effort to converse with a friend, weakness of the optic nerves, so decided, that in reading for a few minutes the letters danced, were confused, and became blended in one undistinguishable mass. These symptoms gradually subsided, and were scarcely noticeable in two weeks; but for some time after this period, walking, or any other muscular exercise, caused hurried breathing and a sense of exhaustion, similar to what anæmic patients experience. There was a disrelish for food, and colombo and Peruvian bark failed to gain any response from the stomach. It seemed surprising that medicines, gastric and nerve tonics respectively, the representatives of their class, should so signally fail in their offices; and, after their faithful use for some time without benefit, I discontinued them, and took an ounce of Bourbon whiskey at dinner. This not only had an immediate and marked effect in restoring my appetite, and the functions of the stomach, but also in awakening the nervous energy, and in imparting tone to the nerve-centres. The instantaneous change was remarkable, and led to a prompt restoration to health, which has since been excellent.

Commentary.—To many it may appear an impossibility to have a spasmodic contraction of the diaphragm of the tonic character, however limited the period, since a forced inspiration would necessarily ensue, and expiration could not take place; whence the aeration of the blood would be interrupted almost completely. It is certain, that this condition cannot long continue, without seriously obstructing the circulation, and causing a fatal congestion of the lungs and cavities of the heart; but, that it may actually occur, I have had the most painful demonstration—the *argumentum ad hominem.* The inflated state of the lungs; the absence of the vesicular murmur throughout the lower portions of the chest, the respiration being effected by the movement of the upper ribs exclusively; the inability to yawn, sneeze, or vomit; the tense, hard state of the abdominal walls; the want of any power to strain down to aid the bladder or intestines in expelling their contents, and the clogged, obstructed condition of the circulation, present an assemblage of symptoms, in my opinion, pathognomonic of this disease; and, if we add to these, the darting, stabbing pain from the spine to the margin of the ribs, on each effort to inspire, the diagnosis is certain, and the only doubt that could be raised would be as to the nature of the spasm. In the present instance it cannot be said positively, whether there was simply a tonic contraction of the diaphragm from the violence inflicted, or a spasmodic condition due to the rheumatic elements present in the system, which the jolting awakened into activity. Adopting the latter view, I would state, that my sensations enabled me most accurately to map out and localize the exact site of the disease. The causation was apparently an engorged and torpid state of the liver, which, by its increased weight through the succussion in riding, strained the fibres of the diaphragm and excited the rheumatic inflammation, the seeds of which had been lurking in my system for some time, as was evident from the occasional stiffness affecting the spinal muscles.

Dr. G. mentioned to me a similar case which he saw when a student. A woman laboring under an attack of inflammatory rheumatism was suddenly seized with the symptoms above detailed, a condition of things that was to him at the time perfectly inexplicable, yet under large doses of morphia after some hours she was relieved of pain, and made, eventually, a good recovery.

CASE OF SHELL WOUND.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—I have the honor to report to you a very interesting case of shell wound.

Private Benjamin D. Thayer, Co. D, 26th Mass., during an engagement with the enemy before Petersburg, on the afternoon of June 30th, was struck by a shell just above the knee-joint of the right leg, while in the attitude of stepping over breastworks. The shell did not explode, but passed up the thigh, crushing the femur to the upper third, then passed back of the trochanter major, and lodged under the glutæus maximus. I removed the shell (which was spherical case, weighing 12 pounds, and 5 inches in diameter) at 8, P.M. After its removal he seemed to rally, but died at 2, A.M., July 1st.

Your ob't servant, Horatio N. Small,
Battlefield Hospital, 18th Army Corps, } *Surg. 10th N. H. Vols.*
Near Petersburg, Va., July 6, 1864. }

ON THE PROGRESS OF ANATOMY AND SURGERY DURING THE PRESENT CENTURY.

By William Fergusson, F.R.C.S., F.R.S., &c.

Lecture I.—Delivered at the Royal College of Surgeons of England, in June, 1864.

Mr. President and Gentlemen,—When the honor was conferred upon me of being appointed Professor of Human Anatomy and Surgery to this College, I felt uncertain as to the manner in which I could best fulfil the duties pertaining to such an important office. Considering the vast fields of anatomy and of surgery which I had to choose from, the difficulty of selecting subjects for six lectures seemed far from great; yet reflection indicated that already the laborer had been at work. In most departments the harvest had been stored, and little remained to be gleaned or garnered which could possibly be put in comparison with the knowledge already in man's possession. To one who has been a laborer in our profession for well nigh forty years such a selection might at first thought seem easy. A teacher of surgery for more than thirty years might surely feel at little loss for material; but that very fact in a manner tells the real difficulty, for as a teacher one is necessarily in almost constant contact with the profession, and whatever he may have fancied new or of value has already been made public by the usual channels. In conversations with assistants and friends, in lectures, in the operating theatre, in the pages of public professional journals, in papers for Societies, in pamphlets, and even in portly volumes, the teacher of old standing and fair repute has already communicated his ideas to his professional brethren so freely and amply, that in his latter years he stands literally unburdened of all to which he may at any time have had original claim. It has been his glory to spread knowledge as readily and rapidly as it may have come within his own ken, and such originality as may have been his own has long since become the property of his profession.

The dilemma with me was that I had nothing new to say. More than twenty years' teaching in a London college and hospital theatre had in a manner "used me up," and, thinking of the kind of audience I might naturally expect within these walls, I had hesitation and doubt as to what might best suit the occasion.

Two courses came prominently before me. I might select a single subject, and say all about it that had been said before by others, and repeat or add all that I myself had said or thought further; or I might select several subjects in which I had myself taken special interest, or had peculiar opportunities of studying, and lay them before my hearers in such a way as to give the appearance of novelty and attraction to an audience assembled in the heart of London, and in the metropolitan abode of English surgery.

Of the two courses I have preferred the latter. If I have nothing to say that is new to my own mind, I may still labor, though in a somewhat novel sphere, to impress such truths as I have learned from experience, to doubt where I have reason still to do so, and to venture such suggestions and forecasts of thought as may become one who has spent his whole professional life in teaching, and who now finds himself in the responsible office of Professor of Human Anatomy and of Surgery in this great corporation.

About the year 1825, when my first intimate connection with the profession began, there was a period of calm (at least that is my impression) such as had not been for many years, and such as none of the present generation have seen. There was nothing new in British surgery, and little from abroad to attract special attention. The great impulse given by Hunter and his disciples had become in a manner embodied with, or, as some might think, become the embodiment of the profession. On the continent, amongst surgeons Dupuytren stood supreme; whilst Graefe, Lisfranc, Larrey, Dieffenbach, and Roux were but a shade behind. The latter had written his celebrated "Parallel," and already Velpeau had indicated his growing worth. In America, the names of Mott and Warren were associated with the boldest deeds in surgery. Here, amongst ourselves, Home, Cline, Blizard, Abernethy, Cooper, had passed away, or well nigh faded from the scene. The same might be said of Todd and Colles in Dublin. Crampton, Carmichael, and Cusack worthily held the highest places in that city; and Brodie, Travers, Wardrop, Guthrie, Anthony White, Key, Stanley, Green, and others yet alive, whose names and deeds inspire veneration, held sway in the great metropolis. In Glasgow, John Burns labored, I may say alone, in a field which had been previously occupied by himself and his worthy brother Allan. In Edinburgh, the reputation of the Monros gave high character to the anatomical and pathological aspect of surgery, and the family reputation was maintained by the third of the name. The brilliancy of John Bell had in the early part of the century given great *éclat* to the school (which was enhanced by his brother Charles, whose name may be honorably included amongst the worthies of London, at the time I speak of), and the solid worth of Benjamin Bell had given a high character to Edinburgh surgery.

About this date the field of surgical practice in the northern metropolis was held by gentlemen of high social and professional stamp, but they were neither professed teachers nor long-experienced hospital surgeons. Each had served a few years only as full surgeon in the Royal Infirmary. One (Mr. Wishart) had published translations of Scarpa's works on Aneurism and on Hernia, but others were unknown to more than local fame. From this list I may bring out and except the name of Russell, the author of an original and still standard work on Necrosis, and at that time revered as a surviving pupil of John Hunter. He was, moreover, the first professor of clinical surgery, and the only one bearing such a title in the United Kingdom. His position as a model surgeon was, however, by no means prominent, and the "pure" surgery of Edinburgh (as the term goes) was little different from that which might be found in any of the large provincial towns in Britain. There was no chair of surgery in the University. That of the College of Surgeons (which was shortly after abrogated) was held by a clever man, whose health and temperament prevented him taking a foremost rank in practical surgery, and there seemed little hope for a continuance of the great reputation of this school, when suddenly there appeared on the scene three men, whose labors have added substantially to the renown of the Scotch school, and whose names will be imperishably associated with the history of British surgery. These men were, John Lizars, Robert Liston and James Syme. I trust that I may be pardoned for making pointed allusion to these surgeons, but as it was from them that I gathered many of my own early views in surgery, I should not wish this opportunity to pass without giving them that honorable mention which, in my opinion, they richly deserve.

Mr. Syme still lives in active manhood, with a world-wide reputation second to none amongst living surgeons. It is considered unbecoming to say that of one yet active on the scene which may be said in after years. Modern surgery owes him much, as I shall show in future lectures. Eulogy might seem to partake of flattery, and for my present purpose it may be sufficient to state, that at the date referred to, this gentleman evinced all that energy of character and aptitude for clinical teaching and for practice for which he has since become so distinguished.

Mr. Liston's fame at this date, particularly as an operator, was well nigh as great as at any period of his comparatively short but brilliant career. In after years his soundness as a pathologist became more conspicuous; and the numerous valuable preparations in the museum of this College which formed part of his collection bear ample testimony to the greatness of his doings in practical surgery. Both he and Mr. Syme had already published those remarkable essays on Amputation which, with the example set by their practice, went far to give that development to the flap operation since attained. Many circumstances contributed to give Mr. Liston early fame in Scotland. A well-developed frame, a broad forehead, a strongly marked handsome countenance, indicative of great courage and decision, and an eye of piercing brilliancy and great expression, at once impressed those who sought his aid with a conviction of his powers. With these were associated a hand alike marvellous for its great size, its silent expressiveness, its vigorous firmness, its lightness, and its dexterity. It was aptly said of it by a distinguished lay contemporary, the late Lord Robertson—"If hard as iron and true as steel in the theatre of operation, it is soft as thistledown when applied to the throbbing pulse or aching brow." The remembrance of that hand is still fresh on my memory.

Some early operations of great magnitude and comparative novelty, aided by a certain amount of jealous opposition which merit is sure to call forth, brought Mr. Liston's fame impressively before the public; and among his achievements may be mentioned the successful removal of a scrotal tumor of more than forty pounds' weight—the first operation of the kind ever performed in this country—and successful ligature of the subclavian, which had been essayed in vain by Ramsden and others in Britain.

When personal recollections have passed away, there will remain much to associate Mr. Liston's name with surgery, but the greatest features of his teaching powers will be forgotten. With less than average facility of speech, he had a manner in all that he did before his pupils that produced the deepest impression; and there was a style in his operations which has had more influence in this department among a large number of pupils than has been produced, in as far as I can make out, by any other man in the history of surgery. Only those who have seen him can thoroughly appreciate what I now say.

Of Mr. Lizars there is now probably less known than of the two gentlemen just referred to; but his fame was great at the time. His folio work on anatomy, with which he incorporated most of his views on operative surgery, had contributed largely to his reputation. Initiated to the profession by John Bell, to whom he served a pupilage, he seemed to have imbibed some of the characteristics of that great surgeon. He was a very successful teacher, both of anatomy and surgery, an excellent pathologist, a brilliant and daring operator. His name will ever remain associated with the early history of modern operations on the upper jaw. He was the only man in Scotland who had placed a ligature on the innominata. The operation was unsuccessful; but it went far to prove, what was then not so well recognized as now, that secondary hæmorrhage in such cases is more likely to come from the distal than from the proximal end of a tied vessel. He was the second to perform ovariotomy, and its practical originator in Britain. Like many pioneers in art and science, he was for this assailed by a certain amount of ridicule associated with vigorous opposition, and thus was thrown into abeyance an operation which, thirty years later, has produced as much excitement as has been associated with the early history of any great surgical proceeding. Whatever may be the fate of ovariotomy, the name of John Lizars must always remain associated with it.

I may be wrong, but the impression is strong on my mind, that an impulse to the more accurate study of surgical anatomy arose coeval with the development of the Hunterian operation. Before I knew the profession, all the great arteries had been tied, from the superficial femoral to the abdominal aorta and innominata, on the principles of our great surgical philosopher. The surgical anatomy of the arteries had occupied the attention of many first-rate anatomists of the early part of this century; and whilst the operations in question were excitingly attractive, others were not overlooked, and hence surgical and regional anatomy took a wider field, and the works of Charles Bell, Abraham Colles, Astley Cooper, John Shaw, Hargrave, and of others, testified to the zeal and accuracy of surgeons in those times in anatomical pursuits having direct relation to their calling. It is an anecdote worth bearing in mind, that when Astley Cooper was engaged in his great and interesting labors on hernia, nothing would satisfy him but a sight of the fact that the obturator artery might encircle the inner side of the neck of a crural hernia. The first preparation that gave this proof was in the museum of the famous teacher of anatomy in Edinburgh, John Barclay (now incorporated with the collection of the Royal College of Surgeons of that city), who actually forwarded it to London to satisfy the hesitation of the great surgeon. It was returned with most complimentary thanks; and this anatomical fact, now familiar to the simplest novice, was soon after made extensively known to the professional world.

There were manuals of anatomy in those days, written by men who have since held the highest professional positions, which really left little for the practical surgeon to desire; in fact, the subject was in a manner exhausted. Whatever was essayed as novel, seemed in reality but a repetition of something already done and known; and, with an occasional exception, there was little left for the modern anatomist but transcendentalism and minute observation. Investigations on ill-defined and obscurely developed quantities have, I fear, taken largely the place of wholesome surgical anatomy; and whilst I shall not go so far as to say that they are not of great value to the education of the practical surgeon, I may state that I have often felt inclined to protest against a system which seems to draw little or no distinction between this kind of so-called philosophy and that common-place, but common-sense, anatomy which is of essential service to the practical surgeon. With some it almost appears as if the bulk of the two thousandth part of an inch were of equal importance to the surgeon as the outlines of the sterno-mastoid or deltoid muscles; and with many it seems to be that there is really little or no difference of essential value between "blastema" and bone, "molecule" and muscle, "cytoblast" and cellular membrane!—nay, actually that once familiar term is now in some degree tabooed, and a man's acquirements are suspected if he does not use instead the modern one of "areolar tissue."

In surgical pathology, it was known that a person might live with an obliterated aorta, and might survive the loss of an upper or lower extremity. Inflammation with denudation of bone was commonly believed to necessitate amputation; and diseased joints with ulceration of cartilages, particularly if denoted by crepitation, were generally deemed incurable, excepting by removal of the limb. Tumors of enormous size were frequently met with, and the disease then familiarly known as fungus hæmatodes was more common than in the present day: in both instances doubtless from timidity on the part of those who feared to meddle with what the modern surgeon arrests in early progress. But a vast amount of important material had been accumulated by the practical men of the day, and the works of Lawrence on Hernia, Brodie on the Joints, Thomson on Inflammation, Hodgson on the Arteries, and Cooper on Dislocations, may be referred to as types of the most valuable and precise surgical pathology which had been given to the profession. Pupils and practitioners had for study and reference in surgery, and to some extent in anatomy, the standard works of Boyer, of Benjamin Bell, of John and Charles Bell, of Abernethy, and of Samuel Cooper, whose "First Lines" was for a long time the favorite text-book, and whose famous Dictionary has, perhaps, not been excelled even to the present day.

Some naval and military surgeons had contributed largely to our general knowledge. Besides the labors of Hunter and of John Bell in these departments, it is in accordance with the intended spirit of this lecture that I should refer to those of Veitch and Copland Hutchinson, of Larrey, of Hennen, and of Guthrie. Although I am myself disposed to take exception to some of the doctrines of these gentlemen as being invariably applicable to the practice of surgery in civil life, I willingly acknowledge the great merits of those who gave us so much information after the cessation of our wars with the first Napoleon, and that much additional material, of unquestionable novelty and value, has been added to our stores by the publication of the so-called military surgery of that eventful period.

In Smiles's "Lives of Engineers" a dozen or more of those who first worked in this noble science are told off, each with a brief, yet interesting memoir, comprised within a few pages; but as engineering has advanced in the progress of time, the works of Vermuyden and Myddleton, of Metcalf and Brindley, seem to be surpassed by those of Smeaton, Telford, and Rennie, until at last a whole volume is required for the life of the elder Stephenson. Were we to compute the progress of surgery in a similar manner, to what limit might the lives of great surgeons not go? To look within the present century, volumes might be written, in which most of the names already mentioned would stand pre-eminent, and it would not be difficult to mark out many of the living generation with whom the progress of surgery is closely associated. It is the boast of those who live in the nineteenth century, that progress in all that pertains to civilization has been greater than in any similar period in history. I cannot venture to claim for surgery the world-wide impression that has been made by steam, by electricity, by engineering, or by mechanics. Yet our art and science have not stood still. If there have been changes and reforms in our laws and civil institutions for the improvement of our social atmosphere (and who can entertain a doubt on the subject?) we may point to our changes, our reforms, our improvements also.

Few things have struck me as more remarkable than the simplicity of appliances and dressing in modern surgery among the best-class practitioners. This arises, I believe, from a better appreciation of the powers of nature, and a more humble idea of our own as to forcing that which can only come in time. It is perhaps in the increased knowledge and better treatment of wounds that the true philosophy of surgery has been most evinced in modern times. The days of the "secret dressings" and of "sympathetic powders" have passed away; and such a man as Colbatch, whom John Bell designated as a "respectable quack," or a pretender like Sir Kenelm Digby, were he even, like that famous man, secretary to a king, would have no influence on the profession and little on the public now-a-days. Yet Digby, had he belonged to our profession, would nearly have been a philosophic surgeon. If. after bringing the edges of a wound into accurate contact, and keeping them so by simple means, instead of affecting mystery and enacting the part of a mountebank, he had told his patient that he had done all that man could, and that nature and time would do the rest, he would have struck the key-note of that which constitutes, in my opinion, a great feature in modern practice. The secrecy and sympathy consisted, in reality, in simplicity; and it remained for John Hunter and for what John Bell called "the London school" to give us our present views on such subjects.

Professor Hughes Bennett, of Edinburgh, has in recent years insisted much on what he calls "rational medicine," the term evidently implying the existence of a converse practice. It is not for me, in my present position, to say much about the practice of physic, but I do not hesitate to say that there is room for "rational surgery" to make useful way. "I cure" or "we cure" is too much in our vocabulary; and it would be more in accordance with the knowledge we possess of nature's actions were we to affect less in this respect, whilst there is a broad margin on which the guiding head of the surgeon might take full credit. It has, indeed, been truly said that surgery is the handmaid to nature; and when the service is judiciously administered our work appears in the greatest perfection. Nature, in many of her inscrutable ways, does that which offends our common humanity; she brings us fevers, atrophies, consumptions, and cancers, over which we have but little control. Livingstone has told us that in parts of Africa where the lights of civilization have not yet appeared, most of those diseases which are at present the scourge of Europe have not yet been seen. May it not be that our boasted civilization has brought upon us many of those "evils" which, with a sort of negative consolation, we say, in poetic language, that "flesh is heir to"? Does not the very style of living interfere with nature's healthful actions in civilized man? Who in these islands can boast of success in lithotomy such as that obtained by our surgeons who practise in Asia? Were cases of elephantiasis scroti prevalent among us, is it likely that we could boast of saving twenty-two patients out of twenty-four operations? Yet such success has been recently recorded by Prof. Ballingall, of the Grant Medical College, Bombay. With all deference to our friends and contemporaries, it cannot be admitted that this success comes from superior skill or dexterity; it is from the subject on which they work—the nearest approach to perfect nature, irrespective of what we fondly call civilized habits.

In speaking of wounds, I should not be doing justice to my own views and experience, nor to the efforts of others, were I to omit reference to the more common use of stitches than was sanctioned some thirty or forty years ago. When early and perfect union is desired in a line of considerable length, they far surpass other methods, and when judiciously applied (possibly in many instances with a due share of additional support) they are of the utmost value. Throughout my experience I cannot say that I have seen the slightest evil arise from them, whilst the best possible good has often been derived. In fact, some of the greatest triumphs of modern surgery are associated with this simple mechanical process; for how else could so much have been done with those vesico-vaginal fistulæ which so baffled our forefathers, and are now so amenable to skilful operative management? How else could the operation for cleft palate have been successfully accomplished? How else could we have dared to lay open the walls of the abdomen to the extent of six, twelve, or fifteen inches? Much has been said in recent times of the superiority of the wire over thread as the material for the stitch; but for my own part I deem the subject of comparatively little importance, whilst I do not hesitate to proclaim my preference of common silk thread for general use.

Until within the present century there was no positive remedy for stone in the bladder but a painful and dangerous cutting operation. The highest talent, skill, and manipulative dexterity have been evoked to set aside the dangers of that proceeding. Surgeons have cut twenty, thirty, fifty patients, losing perhaps only one; but a more extended experience has had the effect of bringing the average of fatality down to the certain loss of one in six or ten. Men have vainly prided themselves on their success—some because of the peculiar shape of a knife; some on the supposition that they have operated more dexterously than others; and superior success has even been claimed on account of a special prayer and appeal to the Almighty just before commencing! We know full well how in the mysterious ways of Providence man's best efforts have failed; his holiest aspirations have seemingly been thwarted.

Happily we of the present day have lived to see the perils and uncertainties of lithotomy set aside in a large number of instances by the less formidable and possibly more successful proceeding of lithotrity. The development of this operation has been within our own time. It is of foreign origin, and British surgeons have taken slowly to it. Until within these twenty years it was practised by few, but latterly it has come into more general use; and if patients would but apply at an early date, when the stone is small, the judicious employment of this operation would go far to supersede the use of the knife, and make lithotomy exceptional. As evidence of the high and useful character of the operation, it has been applied alike to the peasant, the artizan, and the wearer of a crown. Whilst we do all honor to the labors of Gruithuisen, Le Roy, Heurteloup, Costello, and especially Civiale, in developing this proceeding, it is worthy of note that the essential features of the instrument now in use—namely, the male and female blades, with the sharp curve at the end where the crushing is to be effected, and the screw force for that purpose—are of English origin, having been devised by the late Mr. Weiss, our celebrated instrument maker.

For my own part, I am almost disposed to consider that the treatment of distortions by divisions of tendons, muscles, and fasciæ—a treatment founded on a better appreciation than formerly of anatomy, physiology and pathology—constitutes perhaps the most striking example of modern improvement which I could bring to your notice. I take great pleasure in referring to a case, treated by one of our provincial surgeons—Dr. Wiblin, of Southamptom—who in the discharge of his duties, like many others of his fellow-laborers, undertakes the treatment of most ailments that come within his cognizance with energy, skill and success, such as may well be admired—possibly envied—by his metropolitan cotemporaries. Cutaneous puncture and subcutaneous division with a narrow blade, so as to prevent the access of air, make Stromeyer's name worthy of honor in all time to come; and the development of the new tendon in some of these cases is a fine illustration of what Nature will do where man judiciously interferes with some of her imperfect works.

How hopeless was our practice for strabismus in former times! We neither knew the cause nor the means of cure. In the generality of such cases the division of the internal rectus of the eye restores the symmetry of these important and attractive organs. Here the simplicity of the idea almost leads us to overlook its magnitude and scientific character. The illustrious Roux thought his achievement great when he could close by operation the cleft palate as if it were a hare-lip, and be successful in securing union in two cases out of every three operated on. It is my intention to show you in some future lecture how, by division of the levator palati on each side, the operation may be rendered almost as certain in its results as that for fissure in the lip, and that the average of failures is about 1 in 27 or 30.

The skill with which raw surfaces are made and approximated says much for modern progress. Our plastic operations are more marvellous than ever entered the imagination of Taliacotius or the poetic mind of Butler. The almost fabulous transplanting of one part of the body to a distant surface has been realized. The skin on the back of the neck has been lifted forward to supply a deficiency in front, and a portion of the skin of the abdomen has actually been made to do permanent duty on the forearm. Amongst plastic operations, and as illustrative of the value of union by the first intention, I may here refer especially to reparations on the face, and to the closing of wounds and unnatural openings in the urinary organs and parts of generation, particularly in the female. A word of praise in these departments is justly and specially due to our Transatlantic brethren, and amongst ourselves there are many whose triumphs in these cases do the utmost credit to modern surgery.

The application of the stethoscope to surgical diagnosis, the exclusive use of the microscope in pathology, the invention of the laryngoscope and its recent application in practice, are all interesting features in modern surgery. The ophthalmoscope, too, is one of the most ingenious and clever inventions for which surgery is indebted; nor can there be a doubt that, in special cases, the speculum is also of vast service. But I must leave it to greater enthusiasts, and those more skilled than myself, to dilate upon the marvels divulged by these instruments, and to fix upon their relative value as additions to the surgery of the present century.

Ophthalmic surgery has made wonderful strides within our own time; but I do not profess myself competent to dwell on such a theme. It is pleasing to see that those who excel in this department, particularly amongst ourselves, are gentlemen who, from their education and competency, are fitted to hold the highest places in general surgery, and that many of them have held, and now hold, the foremost rank in our profession. Let me here express a hope that some future professor in this chair may be able to say as much for all who may devote themselves to the specialties of modern custom.

Excisions, or resections—the words seem synonymous—have claimed a large share of modern attention; for although we owe to the last century many such proposals and several examples, it is within the present that much has been said about them. But time presses, and I shall conclude my present address by reference to some matters which need not be dwelt upon in other lectures. Of these, that of anæsthesia may be deemed the most remarkable. No single appliance in surgery can, in my opinion, be compared with it; for, although before its discovery most, if it not all, of the great achievements of our art had already been accomplished, the amount of suffering which can now be set aside enables us to relieve surgery of much of its horrors, and to exclude from the patient's senses that which was anguish, suffering and torture; whilst, generally, it permits the surgeon to perform his duty with a serenity of thought and action quite unknown to his predecessors. On this subject America again must have the palm of precedence. There sulphuric ether still holds the first place as the anæsthetic agent; whilst with us chloroform, whose influence was first observed and made public by one of our contemporaries, is considered the most useful. Not long ago Dr. Marion Sims, with laudable enthusiasm, claimed for metallic stitches the honor of being, in our profession, the greatest discovery of the nineteenth century. Few surgeons of practical experience, however, will endorse this. I see nothing which has transpired in the present century which, in magnitude or importance, can compare in our annals with anæsthesia; and, in my mind, it ranks in value to mankind scarcely less than the results of the labors of Harvey and of Jenner.

We congratulate ourselves that we have been permitted to live in times when man has displayed his mastery over steam and electricity, and with us and our special profession there have been agencies at work whose usefulness may be said to be literally beyond calculation. I allude to the improved facilities for education, to our social professional customs, to the medical press, and our own special literature. Our schools have increased in number; our great public hospitals associate, more extensively than ever, education with charity; our handbooks, our works of reference, our means for learning, our appliances for teaching, are beyond compare; and facilities for studying anatomy have, by a wise legislation, been placed lawfully within reach. Our societies and professional gatherings have encouraged and facilitated the diffusion of knowledge: man meets man face to face; thoughts flash almost simultaneously from brain to brain; and there is no longer a difficulty with those in places distant from a metropolis to find out even some roundabout way of communicating interesting or useful knowledge to the profession. A surgeon to a Liverpool hospital in the present day need not, as Park did in 1782, address himself to a leading hospital surgeon in London to give currency to his aspirations; nor need the Moreaus of our day keep their originality under the "cold shade" of an academy or a corporation. Besides the facilities for individual and independent publication, there are our quarterly, monthly, and weekly journals to carry knowledge to the ends of the earth. We pride ourselves in this country on the liberty of the press; we fondly call it our fourth estate; politically and professionally it may be called the pulse of the public mind; and amongst ourselves in our own time it beats with a healthy vigor, indicative of all those changes for the better which I have endeavored to sketch, although I fear but feebly, within the limits of a single lecture.—*London Lancet.*

New Application of Chloroform.—M. Graw, a French physician, proposes to destroy the taste of intensely bitter medicines by mixing chloroform with them in certain proportions.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, JULY 28, 1864.

The Schools of Boston.—We have again and again expressed our opinion in relation to the system of over-study pursued in our public schools, and we believe that most physicians agree with us in our condemnation of this murderous policy upheld by the city in spite of continued remonstrance. So strong was the feeling in the profession just before this all-absorbing struggle for liberty and nationality drew its attention away from home affairs, that the matter was discussed at several meetings of our District Medical Society, and the almost unanimous opinion prevailed that the present system of school instruction was ruinous to the health of the children of Boston. There is probably not a physician in the city who has not occasion every year to insist upon the removal from school of boys or girls who are breaking down under mental over-work. One of our daily journals, always most interested in matters of education, appeared with a most appropriate leader on the morning of the recent annual school jubilee, from which we give the following extract, and which we would like to present to our readers in full. We hope that the public press will not let the matter rest here, but will continue to remind our community that it is one of far greater importance than an unpleasant odor, which excites popular indignation to a white heat, and one, moreover, which should not be trifled with longer.

We cannot agree with the *Advertiser* on one point, however. It exempts the School Committee from blame, so long as it "executes but the public demand." It seems to us that the Committee is almost wholly responsible for the evil. In the effort made by the Suffolk District Medical Society above alluded to, the numerous individual instances of grave disease, cited by physicians as evidence of the injurious working of the school system, were always answered by the Committee with the argument that study was forbidden out of school, and that if parents allowed their children to transgress these rules to the detriment of their health, they alone were responsible. The absurdity of such a statement is openly apparent. The Committee sets up a standard of requirements, which are and can be fulfilled only by the most strenuous mental exercise on the part of the pupils, who are stimulated by rivalry and ambition up to a pitch of intense nervous excitement as the time for the distribution of rewards approaches. We would like to know how many of the present list of medal scholars there are who have not studied at home every day for months? How can it be otherwise when probably not ten out of the graduating class at Cambridge could pass the examination required at the Normal School? No wonder that those who stand highest among its graduates leave it pale and thin. What folly, then, for the School Committee to attempt to transfer the responsibility of its own acts to the misjudged ambition of parents.

"Leaving the system, to discuss the present tendency in practice of the schools, it is evident that careful parents, who care more for the health of their children than for their laurels, more and more regularly attempt to withdraw them from the public schools. For reasons of which we shall speak, the boys escape the ordeal much more successfully than their sisters. But that is only a rare exception. When do we find any skilful physician entrusting his daughters even to the best public school? Yet there is virtually no choice. The private schools are worked at as high a pressure. Their teachers are intelligent enough to regret it, as are their fellow-laborers who work for the public, but that vitiated public sentiment or public indifference which mistakes book-learning for wisdom, drives them up to the over-work which, with very few exceptions, is the vice of our whole system.

"On the other hand, we constantly hear of children withdrawn, where the direction of the physician is the reason assigned. The strain on the whole system is so severe, just at the period of life when the physical functions should be gaining strength, that a medal or a diploma is rightly considered poor pay for epilepsy, for dyspepsia, for typhoid fever, or for pulmonary disease.

"The boys, as has been intimated, take this thing a good deal into their own hands. But girls cannot 'go into water,' cannot play cricket on the Common, cannot form drill clubs: and yet, though the earlier development of women makes it specially necessary that we should relieve them earlier than boys from school, by a sort of fatality we pile upon them a mass of additional sciences which the boys, by some good fortune, escape from. At fourteen, most of the boys throw the whole thing up. Their wages are worth something to their parents, or they themselves decline to have anything more to do with the public schools. Four or five years are left them, therefore, to renew or to create physical vigor before the age of growth is over. The girls, at the same age, are at the most critical period of life. The body is growing most rapidly, its functions are undergoing the most critical changes; its organs are adapting themselves to the necessities of womanhood—and yet at that precise period it is, that we say the rest of the body may look out for itself, but that what we care for is brain, and nothing but brain. The blood shall feed the brain with such nutrition as it can give, and all the rest of the system may go. Still we will not give appetite enough to endow the blood tolerably; for we will not give air or exercise enough to create a healthy appetite. We will have girls who can explain to us the binominal theorem; who can tell us how many metaphors there are in the 'Bugle Song,' and how many metacarpal bones they have. If they can do this, it is no matter, we say, whether their metacarpal bones can sustain the weight of a pail of water, or whether they themselves are ever fresh enough or free enough to have written for themselves a 'Bugle Song.'

"Now this becomes a serious matter—when, as a generation passes, we find that half our young men are exempt from bearing arms by physical weakness, and that half our young women, in what was once the prime of life, are confirmed invalids. It is a serious matter, when for the class which graduates this year at the Normal School, we find that there is another class, as large, of those who have dropped out by the way, unable to bear the high pressure of the Grammar schools and of the Normal. Such facts of themselves show that the practice is as disastrous as the system is absurd.

"The truth has been substantiated in the science of education' that growing children acquire as much in three hours' daily study as they can acquire in a day. On this truth, any true system must be founded. Beyond this period, the 'power of acquisition,' as the English teachers call it, is at an end. If, then, we keep the children in school more than for three hours of study, it is for our convenience, not for their instruction. It may be desirable to assign an hour or more for recitation beyond these three hours; but let it be remembered by all parties, that that is for the convenience of the public, or to satisfy the tax-payer's passion for paying, or to keep the homes of the parents quiet. Let no one pretend that the benefit of the scholar is involved. The true amendment, as we believe, of the folly of the last generation, which has now about run its course, is to be found in some respect for this central truth in education. Let some spirited man of sense in the School Committee move a reduction of the term of school to four hours a day. He will be met with a howl, as if he proposed to set fire to all the school houses. But let him grimly persevere, let him lighten up his argument with cheerful instances of dropsy on the brain, of sleepless nights, of early insanity, and of the rest on the dark side of that medal whose obverse bears Franklin's smile. Let him urge this steadily for a year or two, till some one proposes a compromise on five hours. Let him then begin again with a proposal for three hours daily, and go through the same ordeal till we have come down to four. Four hours, three for study and one for recitations, with proper recesses, and with no evening lessons, would teach the children all that they learn now, and would give them some chance to be strong and wise as well, where now we are satisfied if they are learned.

"It is with some regret that we throw in our protest in the midst of a holiday. It is because this is the only day when the public care for the schools, that we do so. The teachers are not to blame. They see with agony the work of the system. But each of them says that his particular school must keep pace with each other school in the multitude. The School Committee are not to blame, so long as they do but execute the public demand. It is the public which must be taught, that nothing is gained by the high-pressure system; that home-quiet is dearly purchased, when school-confinement drags down the vital power of children, and that the best authorities on education in the world unite in protesting against such confinement and stimulus as are practised in our schools."

THE ONONDAGA INDIANS.—Dr. Jonathan Kneeland, of South Onondaga, N. Y., where the Onondaga tribe of Indians have had their home since the earliest records, gives, in the *American Medical Times*, some interesting particulars respecting the decline and apparently approaching extinction of this once powerful tribe of aborigines. During the American Revolution they could raise 3,000 or 4,000 warriors; whereas now, they number only about 300 souls. Smallpox at different times has carried off large numbers, and within the last thirty years has probably decimated the tribe. Vaccination has been practised only within the last six years, and but to a limited extent. Syphilis assumes worse forms than among the whites. Scrofulous and pulmonary diseases are common, many young men and women dying of the latter. Syphilitic and scrofulous maladies carry off many children during the teething months. Marriages take place at an early age, women are desirous of a numerous offspring; and abortion is seldom purposely procured. The ratio of infantile mortality is very large. The degeneration and wasting away of the population seems caused in part by the practice of intermarrying among themselves, as occasional marriages with distant tribes produce children healthier than those of the native-born, but marriages with whites do not have this effect. The amount of medical knowledge among them is very small—a few vegetable remedies being all the medicine in use, and there is an entire absence of any skill in surgery or midwifery. Grave operations, performed among them by white surgeons, are not well borne. Distorted and deformed limbs are common, many of which, by proper and early treatment, might have been prevented or relieved. Dr. K. has used the forceps in three midwifery cases within the last seven years. In one of the cases the patient left her bed of husks and quilts on the ground, immediately after the operation, while the doctor was washing his hands in the snow at the door, and was found on his return seated on a bench with the other squaws on the further side of the cabin. Epidemics of scarlatina, smallpox, measles, brain fever, or cerebro-spinal meningitis, are more fatal with these Indians than with whites generally.

Harvard Medical School.—The following is a list of the gentlemen who received their medical degrees on the 20th inst., with the subjects of their dissertations :—

Names and Residence.	Thesis.
Elisha Wilbour Aiken, Roxbury,	*The use of Dulcamara in the Treatment of Croup.*
James McGregor Campbell, Sherbrooke, N. S.,	*Diphtheria.*
John Dole, South Reading,	*Ammonia—its Uses and possible Abuses as a Therapeutic Agent.*
Samuel Holmes Durgin, Boston,	*Typhoid Fever.*
Augustus Ebenezer Dyer, Natick,	*Bright's Disease.*
Michael Freeborn Gavin, Boston,	*Idiosyncrasy.*
George Howard Jones, Boston,	*Hernia.*
Samuel Wood Langmaid, Cambridge,	*The Nature and Treatment of simple Fractures of the Leg, with a Synopsis of thirty-nine cases.*
David Francis Lincoln,	*Theory of Inflammation.*
James McDonald, Newport, N. S.,	*Restorative Hæmatics.*
John Brennan Moran, Boston,	*Diabetes.*
Charles Walter Swan, Lowell,	*Uroxanthin.*

D. Humphreys Storer,
July 22d, 1864. *Dean of Medical Faculty.*

Foreign Intelligence.—Prof. Langenbeck, Surgeon-General of the Prussian Army, has been allowed to visit the wounded German prisoners in Copenhagen by the Danish Government and to return.

Rudolf Wagner, the celebrated physiologist, whose death took place in May, was appointed Professor of Zoölogy at Erlangen in 1833, but was called to Göttingen in 1840. His reputation was in a great measure made by the publication of his "Handwörterbuch der Physiologie," which, however, was only partly his own work.

The funeral of Prof. Oppolzer's wife was made the occasion of expressing the profound respect and love which is felt for this renowned teacher in Vienna. The heads of the University and all the students joined the procession, with funeral songs and torches, and the streets were thronged with sympathizing spectators.

Virchow, in the last number of his "Archiv," reports a case of trichinosis in Davenport, Iowa, as the first which has occurred in this country. The worms were discovered in the scirrhous breast of a woman after its removal, and a portion of the same was sent to him for examination. What is of chief interest in the case is the fact that the symptoms of trichina poisoning were noticed seven or eight years before the operation, and yet the worms were found alive.

Important data relating to the period of incubation of the poison of rabid dogs are given in the *Medizinische Jahrbücher.* The period was determined in 224 cases. In 40 cases less than one month; in 143 cases from one to three months; in 30 cases from three to six months; in 11 cases from six to twelve months.

The prize of 50,000 francs, offered by the Emperor Napoleon for the most useful application of electricity, has been awarded to M. Ruhenkorff for his induction coil.

Prof. Czermak, the eminent physiologist, has resigned his professorship at Pesth and returned to Prague, where has founded a private physiological institution and laboratory, and is about to publish occasional "Mittheilungen."

NOTICE.

It will be recollected that the subject of increasing the subscription price of the Journal was brought to the notice of its readers before the commencement of the 68th volume, at a time when many of the newspapers and other periodicals of the day were raising their prices. It was decided, however, that the old terms should be continued, but that the number of pages in the weekly issues would probably have to be reduced, either occasionally or constantly. The price was accordingly continued, but no reduction in the number of pages has since been made. The time has now arrived when it is impossible longer to avoid the adoption of one or the other of these plans; and of the two, an increase in price is the one, we think, most likely to be satisfactory. This also conforms to the plan adopted by other medical journals of the country, and to that publicly agreed upon by the publishers of weekly periodicals in this city. After the termination of the current subscription year of each subscriber, therefore, our subscription price will be $4 a year, and the same to all new subscribers after the 1st of August next, or the beginning of the 71st volume. We need not assure our readers that on our part we shall spare no effort to continue to make the Journal worthy of their support. New subscribers for the current year from February last, will be charged but $3.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, July 23d, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	53	45	98
Ave. mortality of corresponding weeks for ten years, 1853—1863,	42.7	37.7	80.4
Average corrected to increased population - - - -	00	00	88.49
Death of persons above 90 - - - - - - - -	0	1	1

Deaths in Boston for the week ending Saturday noon, July 23d, 98. Males, 53—Females, 45.—Accident, 2—anæmia, 1—disease of the bowels, 1—inflammation of the bowels, 2—disease of the brain, 4—bronchitis, 2—burns, 2—cancer, 1—cholera infantum, 23—cholera morbus, 1—consumption, 10—convulsions, 2—croup, 3—cyanosis, 1—debility, 1—diarrhœa, 3—dropsy, 3—dropsy of the brain, 3—dysentery, 3—epilepsy, 1—erysipelas, 1—scarlet fever, 1—typhoid fever, 1—disease of the heart, 2—hernia (strangulated), 1—infantile disease, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 2—inflammation of the lungs, 3—malformation, 1—marasmus, 1—measles, 1—old age, 2—premature birth, 1—puerperal disease, 1—scalded, 1—smallpox, 1—suicide, 1—unknown, 5.

Under 5 years of age, 55—between 5 and 20 years, 9—between 20 and 40 years, 16—between 40 and 60 years, 8—above 60 years, 10. Born in the United States, 77—Ireland, 17—other places, 4.

TWENTY-SIX WEEKLY NUMBERS—AUGUST, 1864, TO FEBRUARY, 1865.

THE

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EDITED BY

SAMUEL L. ABBOT, M.D., AND JAMES C. WHITE, M.D.

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CASES OF OVARIOTOMY.

By G. Kimball, M.D., of Lowell, Mass.

[Communicated for the Boston Medical and Surgical Journal.—Continued from vol. lxx., p. 490.]

Case VII.—Miss C., of Springfield, Mass., consulted me some time in the month of December, 1863, in regard to an ovarian tumor, which had occasioned her much anxiety, as well as more or less suffering, during the past three years.

She was about 40 years of age, of remarkably fine organization, and but for the disease in question had always enjoyed the best of health. The enlargement, she says, began on the left side, and increased very slowly at first, but during the last year much more rapidly.

While under the care of her physician, Dr. Breck, of Springfield, she was advised to consult some eminent man of the profession in Boston; but the physician to whom she had been directed, after a careful examination of his patient, was unable to come to any settled conclusion as to the real nature of the disease or the proper plan of treating it; whether the enlargement was owing to an ovarian cyst, or a mere peritoneal dropsy. The characteristic tympany, ordinarily observed in the latter condition, being absent, it was suggested by this physician, that for the purpose of settling so important a point, the patient should take something to "*generate flatus;*" and to this end it was thought that a diet of "*baked beans*" might prove effectual. Whatever merit this otherwise valuable esculent may possess as a diagnostic auxiliary in other cases, its virtues in this instance, I understand, were never put to test.

About two weeks after her return to Springfield she was tapped, and 10½ pounds of fluid drawn away, similar, the patient says, in point of color and consistence, to "*small beer.*"

Now that the question as to the real nature of the disease had been settled, her visit to me was to ascertain my views as to the expediency of attempting a radical cure by an operation. The circumstances of the case altogether considered, struck me as favorable for the success of such a measure; though in this, as in every other instance of the kind, however promising in appearance, I refused to advise it—leaving the responsibility of so important a matter entirely with the patient and her friends.

Almost immediately on her return home from Lowell, the removal of the tumor was determined on, and the time fixed upon for having it done. Before the appointed day had arrived, however, she was suddenly seized with severe pain in the right side of the abdomen, accompanied with great soreness, also with extreme difficulty of breathing. To relieve urgent suffering, a second tapping was now resorted to, and 26½ pounds of albuminous fluid drawn away, of darker color and greater consistence than at the previous tapping. Immediate relief followed this operation, but there came on at once great swelling of the *left* lower limb, attended also with pain and extreme sensitiveness to touch. Confinement to her bed and to the house in consequence of this attack, lasted something more than two weeks; she then came to Lowell again, and in two weeks more submitted to the removal of the tumor.

The operation took place the 9th of February, in the presence of Dr. Breck, of Springfield, and Drs. Whitmore, Kidder and Pearson, of Lowell. An explorative examination showed that probably there were no serious obstacles on account of adhesions; so that after having first evacuated the large cyst (the only one beside being very small), there was no difficulty in drawing out the remaining portion of the tumor through an incision not more than five inches in length. It only remained to complete the operation by embracing the severed pedicle in a clamp, and closing the remainder of the wound by two sutures and adhesive strips.

There was severe pain, and repeated vomiting for the first twenty-four hours, but afterwards everything went on most satisfactorily. In just three weeks from the day of the operation, the patient returned to her home.

The only points in this case that seem to give it any special interest or importance, are those which relate to the sudden and severe attack of pain, alluded to in the foregoing history. Severe paroxysmal pains are not unfrequently experienced by persons suffering from ovarian tumors; but they are usually controlled by ordinary remedies. The obstinate persistence of suffering in this instance, even to the requiring a resort to a second tapping, together with the protracted soreness afterwards, were sufficient to occasion a strong suspicion of peritoneal inflammation. The absence of this condition, however, as shown in the progress of the operation, was a gratifying fact, even though considered merely in its bearing upon the case in hand; in future cases, should the same state of things occur, I should certainly feel less anxious in estimating the chances of a successful operation.

In regard to the swelling of the left limb, above spoken of as having followed the second tapping, and which continued for nearly four weeks afterwards, I suppose it may be properly regarded as a condition not essentially different from the phlegmasia incident to childbirth. In its outward appearance I could see no difference.

NATURAL LABOR IN A CASE OF GREAT EXHAUSTION FROM CHRONIC DIARRHŒA.

Reported by David W. Cheever, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

Mrs. A. L., about 30 years of age, has borne four children, the youngest now about 4 years old. Has long been thin in flesh, and slender in strength. Had a hard time in two of her labors, but nothing remarkable in the others. In two of these pregnancies she was troubled with diarrhœa for some weeks, which finally ceased of itself, but which reduced her much, and the children born after these illnesses were small and puny.

1863, Oct. 1st.—Being called to see her child, I noticed that she looked very wan and anæmic. On inquiry, learned that she considered herself about seven months pregnant, and had been troubled with chronic diarrhœa for three months. The discharges were painless, and came on mostly during the night and early morning, and amounted to four or six a day. As she had previously had the same trouble, she thought but little of this, and had let it run on without much treatment. She was directed to be careful of her diet, to use astringents, and also iron. Emaciation was considerable. Debility great.

On the 10th of October, there was no improvement. She looked and felt worse. Had been unable to bear the iron, and was tried with various other remedies without avail.

Oct. 18th.—Considerable tenesmus; many thin, mucous stools; great exhaustion; little appetite. Now mentioned that she had been troubled for some time with a loose, soft cough. She was finally persuaded to go to bed, and soon after remaining in the horizontal posture the symptoms of a dysenteric character improved. There was less straining, and the stools were less frequent, which was ascribed to the rectum and perinæum being relieved of the pressure of the pregnant uterus. The appetite was poor—some beef-tea and beef-juice being the only things borne at this period.

The temporary improvement was only for a day or two. The stools increased to twelve or fifteen a day, and vomiting and severe burning at the stomach supervened. Besides this, the debility increased to an alarming degree. To explain this, it must be remembered that thin, serous discharges existing for months, a very limited diet, and the nourishment of the fœtus, had all been telling on the nutritive processes and combining to pull her down.

On the 23d of October, I was sent for in haste in the morning, and found her faint, with a cool skin and feeble pulse, and apparently sinking. She thought herself dying, and went through the fatigue of receiving the sacrament. The motions of the fœtus could still be felt by her. Opium and stimulants were given, and she gradually rallied, retaining a pulse of 130 throughout the day. The next day but one, a similar prostration recurred. She was now wholly dependent for comfort on opiate enemata, which had been used for some time *pro re nata.* At this time the amount of nourishment borne by the stomach was very small—ice, wine and water, and occasionally a little beef-tea or milk. During the next ten days she often passed the entire day and night without any food—sometimes with two or three teaspoonsful of beef-juice; any larger amount at once brought on distress and retching. Meanwhile the exhaustive tenesmus and frequent stools continued, and under these combined influences she sank to a mere shadow—the cough increasing in frequency, the sputa becoming copious and purulent, with evidences of a rapid organic change in the lungs. A violent hectic was also often present. Of course it seemed vain to hope that the uterus could throw off its contents; or that any means to encourage it to do so could be justifiable, in the patient's very feeble condition.

This state of things continued, growing gradually worse, until Nov. 3d, when I was called to see her about 11, P.M., and found that she had had bearing-down pains, resembling labor-pains, for several hours. The pulse was 128, and very feeble. The pains, though very gentle, produced extreme suffering and exhaustion. The stomach could bear very little. An examination revealed the os uteri expanded about one inch in diameter, and the walls of its circumference very thin, cool, and a little moist. The head was presenting. The motions of the child could be plainly felt through the abdominal walls. The size of the uterus did not appear to be more than that of six months. The patient considered herself eight months pregnant. The pains increased in frequency. I felt that the woman would either die undelivered, being unable to throw off the child unaided, or, if she did, would sink after delivery from uterine hæmorrhage. I went out for some ether, and ergot, and my instruments. I felt pretty confident that the labor must be slow, and that I should have ample time. Before I got back the child was born. Two pains only were sufficient to throw it off. The placenta was retained. There was no hæmorrhage, and the uterus was moderately contracted. The pulse was 130, and very feeble, the skin of the cheeks and nose cool, and the patient with the sighing respiration of exhaustion. A little wine and water was swallowed, and some ergot administered. About twenty minutes were allowed the patient to rally, as there was no flowing. Slight pains now supervening, gentle traction was made on the cord, when it broke off near the placenta, being small and soft. The hand was now introduced into the uterus, and the placenta found detached, but lying wholly in the uterine cavity. Still there was no hæmorrhage. The placenta was removed, and the uterus contracted, with the loss of scarcely a drop of blood. Wine and ergot were repeated, and the bandage applied. So thin were the abdominal walls, and so great the emaciation, that the uterus could be seen as a large, round, hard tumor above the pubes. I remained two hours, but no hæmorrhage occurred. There was considerable after-pain, and some laudanum in wine was given.

The child was evidently at full term. It was a plump, hearty boy of about seven pounds weight, and cried vigorously as soon as born. There was no trouble with the cord, and having been put to a wet-nurse, there is every reason to think it will thrive.*

Nov. 4th.—Next day, the patient was quiet and more comfortable, but very feeble. The passages from the bowels were less frequent, and there seemed some reason to hope that the dysentery might be relieved by the removal of the pressure of the uterus, and were it not for the lung difficulty that the patient might rally. But the improvement was very brief. She again had very numerous dysenteric discharges, with as bad tenesmus as before, and very copious expectoration. Hectic and vomiting added to her miseries, and she sank and died on Nov. 8th, six days after the birth of her child.

This case I have thought sufficiently remarkable to report, for several reasons:—

1st. That the uterus should have held on to its contents until the full term had elapsed, notwithstanding the tenesmus and straining of so frequent and long-continued diarrhœa and dysentery, covering a period of four months.

2d. That the uterus should have been able to throw off its contents with such comparative ease, notwithstanding the very feeble state of the patient, when it seemed, in fact, very doubtful whether she would live from day to day. The involuntary muscle of the uterus discharging its organic function in the midst of such a wreck of the whole voluntary system, was very striking.

3d. Even if the uterus could throw off the child, it seemed extraordinary that there was no flooding, or exhaustive serous draining after the labor.

4th. The size and plumpness and vigor of the child, born of a woman who had been steadily declining for the last four months of intra-uterine life, and who for some weeks had not taken and retained nourishment enough to support a new-born child *out* of the womb.

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* July, 1864.—It is now a vigorous infant of 8 months.

Finally, the question arises whether it would be justifiable and best to bring on labor in a similar case before the natural term. At no time when I saw her, during the last four weeks of pregnancy, did I dare to make the attempt, deeming it not doubtful that the patient would die in labor, even if she lived long enough to begin a natural accouchement. Her carelessness about the chronic diarrhœa, because she had had it in previous pregnancies, prevented her from seeking medical advice earlier.

THE INSTANTANEOUS TREATMENT OF ITCH BY OIL OF BERGAMOT.

[Translated from the Journal de Médecine de Bordeaux for June, 1864, for the Boston Medical and Surgical Journal.]

Dr. Manfre, the venerable clinical professor in the University of Naples, has published, in a Roman political newspaper, many articles on the rapid cure of itch. The best remedy, which he says he has thus far tried with complete success in his clinical service, is, according to M. Manfré, the oil of bergamot, which cures *instantly*, or at most in *two minutes*, even where the eruption is general.

According to him, this remedy, more economical, less irritating, more prompt in its insecticide effects than Helmerich's ointment or sulphur, makes the wards appropriated for patients with this disease in hospitals superfluous; for a single friction over the whole affected surface is sufficient to effect a perfect cure. The patient may return home immediately after this application, the precaution being taken of making him change his clothing, or of thoroughly purifying that which he has worn. An ounce or two of oil of bergamot is enough to complete the cure.

According to M. Manfré, the same remedy may be advantageously substituted for all those employed for the destruction of the *pediculus pubis.*

For a long time physicians have known the insecticide power of the essential oils, and there may be found in some formularies many receipts of M. Aubé for the cure of itch in two minutes. The essential oil of turpentine, mixed with essence of lemon, is the basis of the treatment recommended by this author. Before him, M. Gras had recommended the essential oil of lavender, which is quite analogous to that of bergamot, and has the additional advantage of not costing more than a quarter or half as much.

It is stated in the *London Lancet* that a thorough boiling or roasting, as also perhaps intense salting and smoking, will kill the trichinæ; but an imperfect preparation by these methods will not affect the parasites, at least not those in the interior of the meat. Even putrefaction to a certain extent will leave the trichinæ intact.

PROF. FERGUSSON'S LECTURES ON THE PROGRESS OF ANATOMY AND SURGERY DURING THE PRESENT CENTURY.

Lecture II.—on Conservative Surgery.

Mr. President and Gentlemen,—Bearing in mind the intentions expressed in my first lecture regarding the subjects to be selected, I propose to-day to refer to one in which I have been long and deeply interested. That which has largely filled the mind throughout professional experience, and which has gained strength by years, naturally takes a foremost place.

The grand object of surgery is to cope with injury and to cure disease. All professional men agree on this point, but there is considerable variety of opinion as to the means of accomplishing the end, and as to one form of cure being better than another. Patients ignorant of our resources say, " Give us a cure; that is all we want." But some of us are critical, and think upon the kind best suited to the circumstances. We reflect upon the nature of the accident or disease; its probable issue; how long it may be before a cure can be expected; and, that being realized, in our anticipations we think further of the patient's probable or possible condition when it is declared perfect. Here it may be said that we touch at once upon the grandest features of high surgery. With a full philosophical reliance upon the powers of Nature, and a wonderfully accurate knowledge, gained from experience, of what she is likely to do in any given case, we take upon ourselves the task at one time of waiting upon her, but perhaps as frequently of guiding her, it may be gently, or it may be by rude force, and still with a reliance that she will not fail to do that which we desire, and so effect a cure, which shall be beyond doubt better than that which she might bring about when unaided by human skill. To wait upon Nature is an easy task compared with that in which we attempt to guide or coerce her. Few men are more disposed than I am to give full credit to Nature, but I believe it to be the mission of surgery to struggle with her when she is in error, and he who does this most successfully is the greatest master of his art.

As with many other things in social life, the ways of surgery get grooved. They are hallowed in the estimation of some. Because our grandfathers did so and so, it is often alleged that we cannot do better. Although our grandfathers were our seniors, it is overlooked that we are living at a date when the world is older by two generations. The man who steps from the groove is often held to be rash, and there are more to applaud the common wayfarer than to approve the conduct of one who may seem to doubt the wisdom of his ancestors, and who wishes to test by rational experiment if he can or cannot improve upon the known order of things.

Who can say that we have reached finality even in the grandest conceptions of the human mind? And, who, when seriously questioned, can say this of surgery? The vast additions to our resources within the present century show how far surgery was behind "sixty years ago." May it not be that additions equally great shall come within the next sixty? One thing is certain, that unless some men strike from the beaten track, improvement and addition can hardly be expected. I have known hospital surgeons say that they should like very well to do this thing or that, provided it were proved to them practically. Supposing all surgeons alike in this respect, we should never get the proof. The man of inquiry may have at least three objects distinctly in view when he digresses from the beaten path. He may wish to produce novelty, or to get proof that a certain practice is so good that it should be more largely followed out, or so bad that it should be positively abandoned. Revivals are rarely attended with success, yet great results occasionally follow; and I cannot refer to a more striking instance than that of the treatment of aneurism by compression. Thanks to the courage and good sense of Dr. Hutton, of Dublin, a practice virtually abandoned was again brought under our notice; thanks again to him and his fellow-laborers in that city, it was shown to be of the greatest value. We often talk of schools of surgery, and, without discussing the worth of the term, I may say for that of Ireland that no brighter emblem is associated with any other in these islands. Here was a revival which set aside the use of the knife in a large number of instances where it was thought indispensable, and a practice re-introduced based upon principles almost identical with those which have been gradually developed since Hunter tied the superficial femoral artery for aneurism in the ham. Who among our fathers or grandfathers could have imagined that pressure was yet to become so valuable? and who among ourselves ten years ago supposed that a popliteal aneurism could be cured by the retardation of the circulation effected by merely flexing the leg on the thigh?—a simple mechanical process, indeed, yet founded on some of the best surgical reasonings which we possess.

Looking to the old age of surgery, and the great men who have worked in the field, it is easy to perceive how rarely it must fall to the lot of any one to devise that which is new and also good. Even in such an instance the worth of the novelty is seldom quickly appreciated. The story of Paré and the ligature is familiar to all who know a little of our profession. May not a similar remark be made at some future day regarding Professor Simpson and acupressure? It actually seems to have escaped observation that even our great idol himself, John Hunter, scarcely was aware of the full value of his operation, while it was derided and opposed by those in high places. Hunter spoke modestly and hesitatingly of his own opinions. Bloomfield and Pott gave them their decided opposition. A leading surgeon of the day used the following words:—"An extravagant proposition has been suggested by some people to tie up the principal trunk of an artery in the extremities. I once saw an attempt of this kind in a true aneurism of the ham, in which I shall only remark that the patient died; and I do believe that the embarrassments which occurred, as well as the event of the operation, will deter the gentleman [meaning Hunter] who performed it from making a second attempt in a similar case." Such was the language used regarding the greatest philosopher in surgery, and with regard to the views and actions that led to an operation which, in my opinion, contributed more to the brilliancy and progress of modern surgery than any other that I can name.

With such examples as these, let no man who has common sense on his side be daunted by the cry that "surgery is in danger" when novelty is proposed. Good is likely to come out of honest labor, although the best hopes may be disappointed; and as fair instances of the kind I may remind you of the operations of tying the abdominal aorta and arteria innominata. A caviller might ask, "What is the value of these heroic proceedings, as death has followed in every instance?" My answer is, that they may now be taken as important precedents that such proceedings should never again be attempted on the human body.

Happily, men are found in every generation who do leave the beaten track, and their labors are looked upon with greater interest than those of others, for they are emphatically the men of the time. Their doings in a manner instigate, invigorate and regulate the practice of the day; and when they are gone, if even a footprint be left, their names will stand prominent among those who have contributed to the advancement of surgery.

Amongst various characteristics of modern surgery I shall now venture to draw special attention to a field in which I have myself been an humble laborer. To save life and limb is a grand feat; it may be said to be the highest reach in surgery. There is a stronger feeling abroad at the present time than when I was young that amputation should be avoided by every possible reasonable means. Whilst watching on my own account, I perceived around me indications that others as well were thinking on this subject; and, already, proof had been given that the amputating knife was no longer necessary in many instances like those where it had previously been freely applied. That such a result has finally come about no one can hesitate to admit, and as a familiar illustration, I may at once refer to the treatment of disease of the elbow-joint. If synovial membranes, cartilages and bones seem irremediably diseased, or, in words, beyond hope of cure within reasonable time, instead of performing amputation, the tissues chiefly affected are removed by a local operation, and the forearm, with hand, are left so little damaged that the limb may ultimately, as has often been proved, be nearly as useful as its fellow.

I feel almost ashamed at bringing forward such a common-place illustration, as every well-educated surgeon of the present day must consider it; but I do so on purpose, for it is one which defies contradiction, and it is almost entirely a development of modern surgery. The original suggestion of Park, and its realization by the elder Moreau, produced but little effect either in this country or abroad, notwithstanding the clear manner in which they were brought before the profession, in 1806, by Professor Jeffrey, of Glasgow, and it was not until the operation was taken up by Mr. Syme, that it attracted any serious attention. Although claims have been put in for others leading the way in this direction, I cannot admit them as worth much consideration. Some of these cases are of mythical character. Those who dealt with them may be likened to the original settlers in Australia, who made roads and built bridges of the quartz in which gold abounded. Both were ignorant of the precious things they had in hand. I may refer to Sir Philip Crampton as one who zealously demonstrated the value of this operation; but even his influence would have been but little, and it was left for the energy of Mr. Syme, at the surgical head of a great school, to place this operation on a sure footing, with a character of usefulness unexcelled in the range of surgery.

But this is only one of the examples in which, in modern times, surgery has triumphed in setting aside amputation; and to illustrate my present task I must glance, although rapidly, at additional instances of success in this direction.

I believe it to be a common opinion, that when a piece of bone is bare, or a joint grates, there is no probability of recovery in the part, and that amputation is the proper course. This, however, is a great error; for bare bone is covered again in many instances, and a joint may still be so far restored that there may be a certain amount of motion in it, or if not, there may still be a cessation of disease, with a useful member. Even when bone is dead, nature causes a separation, and thus leads the way to its removal, either by spontaneous evolution or by the hands of the surgeon; so that a limb may be retained with much of its original appearance.

These things are so thoroughly understood by most well-educated men of the day that it may seem strange to allude to them; yet my own experience has told me that fingers and thumbs—aye, even large limbs—are frequently sacrificed, when a little waiting and judicious management might bring about a result far more creditable to surgery and advantageous to the patient.

It may seem to many almost beneath the dignity of my present position to bring such a case as this before you. A gentleman of active habits, and in charge of a large establishment, to whom the use of the pen was of vast importance, had a bad whitlow in the end of his right thumb. An abscess was opened in due time, when the distal phalanx was found bare. Amputation was thereupon urged, but the patient objected. He was then, on taking another opinion, advised to wait a little. In a few weeks the bare bone, consisting of about one half or two thirds of the phalanx, was removed by forceps through the original opening for the abscess; and ere long the thumb, seemingly entire, was as useful as it ever had been. Let me add another case. A shoemaker—shall I say, to make the case more interesting, "a son of St. Crispin"—a great cutter in his way, had a thumb similarly affected; and he, too, was recommended to have amputation performed. But a dead bit of phalanx was extracted here also, and he, like the other patient, rejoices in a useful thumb to the present day. I might recite many similar cases; but, doubtless, most of you have had experience of the kind. If so, you will think with me, that amputation in such cases is not required; and that when done, it is a deplorable example of meddlesome, bad surgery. It is in reality because I have seen so many similar cases of error in this direction, that I have made so bold as to bring them under notice in this theatre, where, naturally, only the so-called grand things in surgery may be expected to be spoken of. Opinions may differ; but for my own part, I deem it a grand thing when by prescience even the tip of a thumb can be saved.

I have the additional reason, too, for alluding to such cases, that they serve to illustrate a kind of practice in which I have for two thirds of my experience as a practical man been deeply interested, and to which I have ventured to give a name as if it were a special department in our profession.

With a conviction, founded on practical experience, that many limbs and members had been sacrificed by amputation which might have been saved; that deeds had been done which, on a superficial glance, seemed as high art in our profession, when in reality they were indications of weakness, being the very *opprobria* of our calling, I ventured to call attention to such matters in a paper in the *Medical Times and Gazette*, published on the 3d of January, 1852, wherein I first made use of the term "*Conservative Surgery.*"

It would indeed be arrogation were I to affect being the first in such a field of practice. In the paper referred to, I showed how others had been before me; and it may be truly said that all surgery is conservative, its grand object being to save limb and life. Yet the phrase was new in surgery, and was used in a particular sense, which it is partly my object to explain in this lecture. It is, indeed with feelings of pride that I see and hear it used so familiarly. It is now a part of our common nomenclature; it is often in the mouths of those who know not its origin; it is used by military practitioners as well as civil; it has become familiar in our provinces and colonies, and has resounded even from the antipodes. It was, in a manner, hallowed when used as applicable to the practice of one of the last departed of our greatest worthies, Sir Benjamin Brodie; for the author of a memoir of that surgeon thought it a high compliment to state that his practice was eminently "conservative." Even now

I know of no instance better illustrative of the subject than that which I described from Sir Benjamin's practice in the paper alluded to. The memorable instance in which he amputated a leg for incurable pain in the tibia is one of the beacon lights of surgery never to be forgotten. It was, if I mistake not, the model case on which all our modern ideas about abscess of bone are founded, and the pathological examination of that limb led to a line of practice of inestimable value, which even at the present day is, I imagine, scarcely appreciated at its full worth. Brodie saw that intolerable pain had been caused by a deep-seated abscess in the tibia, where the matter could find no escape. In the next case of the kind which came under his notice, he bored an opening in the side of the bone, gave exit to the matter, and so relieved the patient of pain; and, whilst curing his malady, saved the limb from amputation. The example has been followed again and again, with great advantage, and I repeat that I know not, even now, a better illustration of conservatism in the whole range of practical surgery. The operation was scarcely known when I began the profession, and I confess that it was not until I had been many years in practice that I appreciated its value. and, in particular, saw to what it was in a manner the key. It led me to reflect on other instances where local operations had, or might have, sufficed for the sweeping mutilation of amputation; and I threw together a number of examples wherein, after removal of parts locally, and even extensively, useful limbs had been retained, and thus I felt that the so-called opprobrium of surgery—amputation—had in these cases been successfully set aside. As years have rolled on, this line of practice has been gradually developed into a kind of system, and many modern surgeons are more proud of the number of members or limbs they can refer to as saved in this way than others are of the comparatively common-place operation of amputation. Let me say in extenuation of this expression, that no one can more thoroughly appreciate a well-performed amputation than I do; but I certainly appreciate more highly the operation which sets aside the necessity for that mutilation.

Since my views on conservative surgery were first disseminated, I have observed with regret that some have alluded to the term without having a proper appreciation of its meaning. To treat a fracture in the ordinary way, to cure an ulcer, to deal successfully with a chancre with or without mercury, have been alluded to as examples of this sort of practice. Surgery is emphatically preservative or conservative in such cases; but the phrase was coined and used as applicable to a line of practice whereby the loss of a limb might be averted, and the meanest act of surgery—namely, amputating for seemingly incurable local disease—might be superseded by more perfect adaptation of surgical science and art. I certainly should not presume to address you on this subject were it not that I have a strong conviction that surgery has made great strides of improvement in this direction within the period of time to which these lectures are chiefly confined.

Again I repeat that this kind of practice cannot be considered new. Every saving act of surgery may be so denominated. But the phrase in modern times has a peculiar significance, for it is meant to show that instead of the sweeping and radical measure of total separation or amputation, a compromise may be made whereby the original constitution and frame, as from the Maker's hand, may be kept as nearly as possible in its normal condition. When Hunter tied the superficial femoral artery for popliteal aneurism, he did a great act of conservatism. Here are his very words. In referring to amputation for aneurism in the ham, and to the old operation which Pott objected to, owing to the state of the artery near the disease, "*why not tie it, up higher in the sound parts, where it is tied in amputation, and preserve the limb?*" His object was to avoid amputation: and he then initiated a long and successful career in that direction. It was a vast idea and a vast triumph for the time.

But instead of thus in a manner reiterating, let me rather bring forward modern illustrations of conservatism to shown the sense in which I wish the term used.

At first sight it may appear that, in dealing with tumors, when the knife is applied there is no room for such practice; yet even here I believe it to be peculiarly applicable. There is a poetic fallacy regarding the skilful surgeon who boldly cuts beyond the seat of disease, by way of making sure of its eradication, which should have no consideration with the good pathologist. Whilst doubtless this maxim is safe in cancers, I believe it to be fraught with great mischief in most other cases, and some of the finest things in modern surgery are done seemingly in the very midst of disease. As illustrative of this, I may refer to excision of joints. A feature of these operations is, that they are done in such locality. Here we see the difference between ancient theory and modern fact. There is no need in such instances of making sure that all the incisions are beyond disease; the articular surfaces, possibly some portions of the ends of the bones, are the really incurable parts; and if these are once removed, the surrounding swelling, which to the eyes of the ignorant will appear as the chief disease, will soon diminish, and ere long pass away. Yet what monstrous mistakes have been made on this very point! Limbs have not only been amputated, but amputation has been performed far higher than needful, because of the mistaken idea that the knife must sweep beyond all semblance of disease. It may seem strange to many here that I should refer to such a subject, for they will say, Who can be ignorant about it? who has not seen the elbow-joint taken out from the midst of great swelling? But there are many who have not yet seen even the elbow taken out, and many who imagine that the great surrounding swelling is a bar to such an operation. Here is the cast of an arm on which one of the earliest excisions of the elbow in London was performed: I say this advisedly, for twenty years ago the operation had not been performed a dozen times in this metropolis. The excision was done in public, and many of the onlookers were amazed at the seeming folly of the practice. Only the articular extremities of the bones were taken away. Immediately after the operation the swelling seemed well-nigh as great as ever; yet see from this other cast what a change took place in a few months. I believe that there are few doubts now on this subject, as regards this individual locality; yet how many will admit, how many will deny, the doctrine as applicable elsewhere? Are there six surgeons in England who have amputated at the knee for white swelling? Is the scrofulous swelling round the diseased ankle, are the foul ulcers and sinuses in such swelling, not, even yet, considered as serious, aye, insuperable, objections to amputation at that joint? and has it not been proved beyond doubt that the sinuses and ulcers close, and the swelling subsides, soon after the diseased articular surfaces are removed?

In the removal of tumors which are prominent on the surface, it is a common practice to include an elliptical portion of the skin. Now, excepting in instances of cancer where this texture is involved, and a few rare exceptions, I consider this to be a great error. For cysts on the scalp of or above the size of a walnut, this practice may be said to be the rule; yet the loose bag of scalp, if one is left, will very speedily contract to its natural dimensions, while when an ellipse is taken away there is apt to remain a broad, white, bald cicatrix. In removing an enlarged testis, the custom is to take away a portion of skin too; yet the scrotum is so contractile that soon after, although only a slit be made in the skin, it will appear less voluminous than on the untouched side. The contraction of the skin in this locality is well exemplified in instances of large hydroceles where, after the radical cure, the scrotum soon assumes its normal size. It is seldom indeed that I remove any portion of the skin when it is merely stretched and attenuated over the disease.

But here is an example to show the disadvantage of taking away a portion of merely overstretched skin. A large tumor was removed by Mr. Liston in the Royal Infirmary of Edinburgh, shortly before he left that city for London; and in all my experience I think I never saw a more brilliant operation. Such a proceeding was then both novel and rare, and to the present time it is the largest growth of the kind in this locality that I have ever met with. A few minutes sufficed for the operation, and the patient made a rapid recovery. But mark the history in this respect! The mouth was so drawn to one side, and the skin seemed so overstretched, that the operator was induced to take away an oblong strip, about an inch or more in breadth, from the mouth to the temple or zygoma. The sides of the wound, from the angle of the mouth upwards, came nicely together at the time; but the skin contracted rapidly to its normal state, and union did not take place. At last there was left a large gap, extending from near the angle of the mouth up the cheek to the temporal region, eyelid, and side of the nose, which exposed the tongue and lower part of the mouth; and the poor woman, although relieved of the tumor, was disfigured grievously for life. Mr. Nasmyth, of Edinburgh, by ingenious mechanism, endeavored to fill up this gap and improve the poor woman's appearance materially.

When a part of the body is dead or incurably diseased, and must of necessity be removed, I am of opinion that conservative surgery may be displayed in a variety of ways. The examples already quoted of caries, of necrosis, of diseased joints, and as regards overstretched skin, are so palpable that few will object to their being thus characterized. Operations on tumors of the jaws may be said to be performed to relieve distress, to obviate deformity, to give future comfort and immunity from further disease. A feature insisted upon by Professor Lizars with regard to operations on the upper jaw was, that the whole maxilla should be removed. Now, further experience has shown that in many instances no such extensive measure is required. The removal of the actual disease, wherever it may be, is all that is essential in such instances, provided the tumor is not malignant, for then even the removal of the whole bone is a questionable step. In these operations we can have conservatism as regards preservation of parts and preservation of appearance, of both of which I hope to give you proof as we proceed with these lectures.

In operations on the lower jaw, conservatism may be, and is, displayed in a manner to which few give much heed. But I beg your particular attention to this fact, that tumors of great size have been removed from this bone. The whole of one side thus implicated has been cut away by incisions across the bone, and the portion left has remained healthy throughout life. I have myself taken away by a horizontal incision as much of the alveolar margin of this bone as contained ten teeth, yet there was no return of the tumor for which the operation had been performed. In the last of these proceedings there was conservatism in not interfering with the base of the bone, and thereby preserving the face or chin from considerable deformity. In the first there was the like display in not taking away more than was necessary. How few have reckoned on the value of cases like these, as showing that in tumors of osseous tissue it is not necessary to remove the whole bone. Yet such a doctrine of destruction has got strangely, and, in my opinion, alarmingly prevalent. If a tumor shows in the tibia, even at its lower end, supposing amputation to be decided on, there are many who maintain that the operation must be performed in the thigh; for if any of the bone be left it would be sure to be the seat of a return of disease. The same doctrine is applied to the femur and to every long bone; yet there are no just grounds for such a doctrine. Besides the instances to the contrary which I have already given, I may say that when disease does return after amputation for such tumor, it is seldom in the bone, but most generally in the soft parts, and often, too, at a considerable distance from the original seat of disease. It is implied that there is a peculiar circulation in a long bone, whereby, if disease be removed by amputating one end only, the vessels will be sure ere long to work in a similar manner in the end that is left. Now, as your Professor of Human Anatomy and Surgery, I protest against this doctrine. There is positively nothing in anatomy to support it, and I can hardly admit a single instance in pathology; for where disease has shown itself in bone after excision or amputation, I am more disposed to think that there has been some of the original malady left, than that the vessels in the remaining part have imitated the action of those concerned in the development of the original tumor.

But time warns me that I cannot dwell much longer on such topics at present. Suffice it to say that modern surgery has given us plenty of instances to show that tumors may be taken from bones, involving the whole thickness thereof, so as to admit of the preservation of a useful limb, and where disease has not returned.

As examples of conservative surgery, I may name the varied cunning operations performed on the fingers and portions of the hand to keep that important organ as entire as possible. On the foot there are many of a similar character. The partial operations on the tarsus by scooping out portions or removing whole bones, such as the cuboid or calcaneum, are pleasing examples of this style of surgery. Possibly in these days we have rather overlooked the vast merit of Hey's and Chopart's amputations; and who can doubt the conservatism and the advantages of amputation at the ankle by Syme's method or that of Pirogoff, compared with the palpable mutilation of amputation in the leg?

But should there yet be doubt about what I mean by conservative surgery, let me, in concluding this lecture, give you three further illustrations.

Mott, Warren, Syme, and others have removed portions, even the whole, of the clavicle, still preserving a useful extremity; and as further illustrations of the practice of removing portions of diseased bone with good effect, I may refer to the instances recorded by Travers, Luke, South, and others, of partial operations on the scapula. Here is a tumor nearly the size of a fist, which involved the lower angle of the scapula, in removing which I sawed the bone across. Two years have nearly elapsed, and there is no appearance of return. Mr. Liston, in 1819, removed three fourths of the scapula for a vascular growth. The disease did return in the bone in this instance, but the operator could get no one to sanction the removal of the whole bone "with the arm and half of the clavicle," although there was a kind of precedent for this in the instance in which Mr. Cumming, in 1808, amputated the upper extremity at the shoulder-joint, and removed the scapula immediately after.

The project of removing the entire scapula and leaving the rest of the upper extremity, was happily realized by Mr. Syme in October, 1856. The patient, about seventy years old, survived nearly two months—sufficiently long to encourage good hopes for future cases. In May, 1858, Mr. Jones, of Jersey, performed a similar operation. The whole scapula was removed, and the limb was preserved. Six years have now elapsed, and the patient lives, in excellent health, with a useful limb.

In November, 1860, Mr. Syme removed the head of the right humerus for a tumor, with a view of avoiding amputation at the shoulder-joint—which, in fact, would be required, if the growth were allowed to increase. A year afterwards some indications of further disease were evinced "on the upper and back part of the shoulder," and so alarming did the symptoms appear that he recommended the removal of the scapula and arm at the same time. The patient at first declined such an operation, but was not long in submitting to whatever the surgeon might think best. The happy idea struck Mr. Syme that he might remove the scapula by itself, as with the former patient. In November, 1862, the scapula, with a portion of the clavicle, was removed by that enterprising surgeon, the diseased mass weighing between four and five pounds; and in January of the present year (1864), Mr. Syme reported that this patient remains in perfect health, with a wonderfully useful arm. Looking to the fact that this man had already lost the head of the humerus, the case seems to me the *ne plus ultra* of "conservative surgery." Contrast it, I pray you, with those cases of total removal of the scapula and upper extremity recorded by Cumming, Gaetani Bey, M'Lellan, Gilbert, Rigaud, myself, and by Mr. Syme. Great though these may be as regards the magnitude of each operation, the cure of disease, and saving of life, I decidedly give the palm to the operations of Syme and Jones. Here is a sketch of my own case of removal of the scapula after the arm had been amputated at the shoulder-joint by some rash hand before. The loss of the arm seems deplorable, and looking at it as having occurred some fifteen years prior to the operations of Syme and Jones, the contrast between these pictures speaks volumes in favor of that progress for which I now plead, and I know of no bolder conservative feats in surgery than those of the two gentlemen just named.

Here is the cast of a boy's lower limb, and here is one from another similar case. In each the leg is bent at the knee to a right angle, the knee is swollen, and there are openings and sinuses in all directions. The history of each case told of incurable disease of the knee of several years' standing; the probe indicated an open joint, and, besides bare articular extremities, a great stretch of necrosis of the femur extending upwards for inches. The proof of extensive disease, the distortion of the limb, the state of hectic, all indicated the utmost hopelessness excepting from amputation. The leg and foot were sound, as was the greater part of the thigh. Instead of applying the amputating knife, local measures were taken. A large amount of necrosis of the femur was removed from each as a commencement. Soon afterwards the incurable articular surfaces were taken away; in other words, excision of the knee was performed. Here is a cast of one of these cases afterwards; unfortunately the lad got hip disease subsequently, but you will observe that my limb (the left) is the best; and this is the cast of the other; but, better still, here is the boy himself, with the leg that was preserved. He can stand upon it for hours, and walk miles daily. Of all my feats of conservatism, I know of none of which I am prouder.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, AUGUST 4, 1864.

THE "Chloroform Committee" of the Royal Medico-Chirurgical Society of London, after more than two years devoted to its preparation, have made their report. An abstract, prepared by the Committee in advance of publication, the document itself being very voluminous, may be found in the *Lancet* of July 16, 1864.

The three sections of the Committee (surgical, obstetrical, physiological) have evidently reviewed the subject with great care (one of them having held seventy meetings), and though nothing new characterized either their statements or conclusions, the report will prove of great value—especially in England, where the numerous deaths from chloroform have so deranged the minds of surgeons on the whole subject of anæsthesia—as the matured decision of a body of scientific experts upon the questions connected with anæsthesia, and upon which varying opinions have been held.

The grand feature of the Report, however, which gives it its chief importance, lies in the great concessions made with respect to sulphuric ether. These concessions, for which it would appear from the debate following the report, the members of the Society were scarcely prepared, are all the more satisfactory from the clearness with which they are asserted, and constitute a most gratifying triumph of the opinions so long and so strenuously maintained on this side of the Atlantic. It is creditable to the impartiality of the Committee that, in spite of the prejudices of their constituents, the inevitable conclusion with regard to the greater safety of ether should be so distinctly set forth, while the compromise which they recommend in the combined use of sulphuric ether and chloroform is more than could be expected, and probably all for which the community is prepared, in a country where complete ignorance and inexperience prevail with regard to the use of ether.

We take great pleasure in laying the following extracts from the report before our readers. The italics are our own.

"The first effect of chloroform is to increase the force of the heart's action; *but this effect is slight and transient, for when complete anæsthesia is produced the heart in all cases acts with less than its natural force.* The strongest doses of chloroform vapor, when admitted freely into the lungs, destroy animal life by arresting the action of the heart; whilst by *moderate doses the heart's action is much weakened for some time before death ensues,* respiration generally, but not invariably, ceasing before the action of the heart; death being due both to the failure of the heart's action and to that of the respiratory function. *The danger* *attending chloroform increases with the degree of stupidity it induces.* * * * * In order that it may be administered with complete safety it is necessary that the proportion of vapor should not exceed 3½ per cent. * * * * * * * * *

"In many respects the action of ether is similar to that of dilute chloroform. At first its vapor increases the force of the heart's action—*an effect which is both greater and of longer duration than that observed with chloroform.* The stimulation is followed by a depression of the force of the heart's action, *but at the same degree of insensibility ether does not depress the action of the heart to the same extent as chloroform.* * * * *Thus the energy with which chloroform acts, and the extent to which it depresses the heart's action, render it necessary to exercise great caution in its administration, and suggest the expediency of searching for other less objectionable anœsthetics.* Ether is slow and uncertain in its action, though it is capable of producing the requisite insensibility, and *is less dangerous than chloroform. On the whole,* however, the Committee concur in the general opinion which in this country has led to the disuse of ether as an *inconvenient anœsthetic.* * * A mixture of three parts of ether, two parts of chloroform and one part of alcohol (by measure), is to be preferred, on account of the uniform blending of the ether and chloroform when combined with alcohol, and the equable escape of the constituents in vapor; and the Committee suggest that it should be more extensively tried than it has hitherto been in this country."

It is conceded then that chloroform is unsafe and falls short of the desired perfection, and that if sulphuric ether does not meet all the requirements in an anæsthetic it produces insensibility without the dangers of chloroform, may be given in cases of accident accompanied by "shock," when chloroform cannot with safety be administered, and that hereafter its qualified use is recommended. The "inconvenience" of sulphuric ether is the only reason why its unconditional adoption is not advocated.

The mixture proposed by the English Committee is virtually a combination of chloric and sulphuric ethers; chloric ether being only chloroform dissolved in alcohol. This was long ago extensively used in this city and abandoned as unsafe. It is well appreciated here that such a mixture, similar, except for the pernicious addition of alcohol, to that recommended by Dr. C. T. Jackson in the Ether Report of the Boston Society for Medical Improvement, does not meet the approval of those familiar with the use of pure sulphuric ether; for while, by increasing the strength, it diminishes to a slight extent the bulk of the anæsthetic, the addition of chloroform to ether retains all the dangers of the one without improving the other, or dissipating any of its alleged inconveniences.

But, as we have said, we hail this step on the part of English surgeons as a great advance, and the first towards bringing about the day when all men everywhere will subscribe to the conclusion, of the Ether Committee of the Improvement Society, that "The advantages of chloroform are exclusively those of convenience. Its dangers are not averted by its admixture with sulphuric ether in any proportions. The combination of these two agents cannot be too strongly denounced as a treacherous and dangerous compound. Chloric ether, being a solution of chloroform in alcohol, merits the same condemnation."

The other points of the report of interest in this country are very few. We find it stated that chief reliance is to be placed upon artificial respiration to restore suspended animation, in cases of threatened or apparent death from chloroform, and that galvanism, though it does resuscitate, is less reliable than persistent efforts to re-establish respiration.

With regard to the alleged increase of deaths following surgical operations since the discovery of ether, we learn that "the results of 2,586 capital operations performed before, and 1,860 since the introduction of anæsthetics, prove that they have in no degree increased the rate of mortality."

Of its use in cases of labor it is asserted, that "the balance of opinion is nearly equal as to whether it predisposes to imperfect contraction of the uterus after delivery."

We trust that this report will be extensively promulgated wherever the habit of using chloroform prevails. It cannot but discourage a continuance of the practice. If there were only some one to teach the use of ether in the great cities of Europe (for nothing can more disqualify an individual for superintending the inhalation of ether than the habit of giving chloroform), search would soon cease for means by which chloroform might be administered with safety; for it would be found that the inconveniences on the part of ether, of bulk, odor, and slower action, all of which become diminished objections by practice and habit in its exhibition, are more than counterbalanced by the feelings of entire confidence and security, reassuring to both surgeon and patient, with which the inhalation of this anæsthetic may be conducted.

A NEW medical periodical, with the title of "Canada Medical Journal and Monthly Record of Medical and Surgical Science," has been started in Montreal, to be published monthly—edited by Drs. G. E. Fenwick and F. W. Campbell. It promises to be a credit to the medical profession in British America. We sincerely hope it may meet with better success than its predecessors. The first two numbers have been received.

The registration of births, marriages and deaths in Vermont for the year 1861, has just appeared, the publication being delayed by an omission of the usual appropriation. The births were 6567, the deaths 4038, the marriages 2188, and the divorces 66. More than twenty per cent. of the deaths were from consumption, and nearly twelve per cent. from diphtheria. The percentage of deaths was 1.31 of the entire population. A little more than the average. By a comparison of the registrations for the last five years with the census of 1860, it appears that while the State has increased its population 13,699, by the ascertained excess of births over deaths, it has lost by emigration 13,210, leaving only the small number of 489 as the net gain in five years. This loss by emigration is not apportioned uniformly among the population, with respect to age or condition, but is limited almost entirely to those in youth or middle life.

IN 1863 no less than 1537 patients (15 of whom were not suffering from smallpox) were admitted into the Smallpox Hospital in London. The deaths amounted to 274, or 17 per cent. of the whole admissions. Of the whole number, 247 were unvaccinated, and 1273—no less than 83 per cent. of the admissions—vaccinated. The deaths amongst the unvaccinated averaged 47 per cent.; amongst the vaccinated, 9.9 per cent.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JULY 30th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	71	61	132
Ave. mortality of corresponding weeks for ten years, 1853—1863,	49.2	46.5	95.7
Average corrected to increased population - - - -	00	00	105.32
Death of persons above 90 - - - - - - - -	0	1	1

PAMPHLETS RECEIVED.—Annual Register of the Rensselaer Polytechnic Institute, 1864.—The Nervous and Vascular Connection between the Mother and Fœtus in Utero. Revised and enlarged. By John O'Reilly, M.D., F.R.C.S.I.—Ophthalmic Review.

DIED,—In Philadelphia, Dr. Edward F. Corson, U.S.N., son of Dr. Hiram Corson, aged 30.

DEATHS IN BOSTON for the week ending Saturday noon, July 30th, 132. Males, 71—Females, 61.—Accident, 2—apoplexy, 1—inflammation of the bowels, 1—congestion of the brain, 3—disease of the brain, 2—bronchitis, 1—cholera infantum, 36—cholera morbus, 1—consumption, 11—convulsions, 6—croup, 1—cyanosis, 1—diarrhœa, 8—diphtheria, 1—dropsy, 1—dropsy of the brain, 4—drowned, 2—dysentery, 5—scarlet fever, 5—disease of the heart, 2—infantile disease, 1—intemperance, 1—disease of the lungs, 3—inflammation of the lungs, 4—lupus, 1—marasmus, 1—measles, 2—cerebro-spinal meningitis, 1—old age, 3—paralysis, 1—smallpox, 3—teething, 1—inflammation of the throat, 1—unknown, 15.

Under 5 years of age, 78—between 5 and 20 years, 14—between 20 and 40 years, 18—between 40 and 60 years, 8—above 60 years, 14. Born in the United States, 106—Ireland, 21—other places, 5.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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OPERATIONS FOR THE CURE OF VESICO-VAGINAL FISTULA.

By R. M. Hodges, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

The following cases are not reported on account of any unusual success of treatment. A single operation frequently gives a greater proportion of cures than was obtained in the six cases to be narrated. They only show, what is not generally enough appreciated, that the distressing condition entailed by a vesico-vaginal fistula may be recovered from by a very large proportion of its subjects.

I.—C. S., æt. 30; wife; born in Ireland; mother of two children. Entered Massachusetts General Hospital Aug. 25th, 1863. Her first labor was accomplished by the aid of forceps. Three months since she was again delivered, without instruments, after sixty hours of labor, the child dying almost immediately. One week after this confinement she noticed that her water dribbled away without control, and the incontinence finally reached such a degree that no urine passed by the urethra. On examination, there was found a fistulous opening of the vagina into the bladder, an inch and a half behind the meatus urinarius. It was about one eighth of an inch in diameter, and lay at the bottom of a dimple in the vaginal wall, half an inch to the left of the median line. Around the fistula the vesico-vaginal septum was extremely thin—so thin, that to refresh and approximate its edges would require enlargement of the opening to an aperture three-fourths of an inch in diameter. After unavailing efforts at obliteration by the use of caustics, an operation adapted to the peculiarity of the case was performed, Sept. 8th, 1863.

The bowels having been cleared by an enema, preceded the night before by a cathartic, the patient was placed upon her back in the position for lithotomy; the fistula was well exposed by broad and long spatulæ, two of which, the lateral ones, bent at right angles, were managed by the assistants supporting the patient's legs, while a third, bent to a pot-hook shape, depressed the posterior wall of the vagina and was controlled by the operator himself, through the medium of a loop of bandage fastened to the protruding curve of the spatula, and in the bight of which his foot was placed as in a stirrup.

Operation.—This consisted in denuding of its mucous membrane the entire vicinity of the fistula, without enlarging it, over an elliptical-shaped space extending three-fourths of an inch in front of and behind, and more than an inch laterally from, the orifice. A flap was then raised from the vagina behind the fistula, as thick as safety permitted, and dissected up enough to avoid tension, and permit its being slid forward so as to cover over the denuded surface previously prepared, its free edge being met by a lip turned up along the anterior border of the latter. A tubular needle, armed with silver wire, was entered in front, towards the urethra, half an inch anterior to the limits of the dissection, carried carefully backwards through the tissue intervening between the denuded surface and the mucous membrane of the interior of the bladder, and not allowed to come in sight until it emerged half an inch beyond the posterior flap. Four ligatures were passed. As each of these was introduced, the bladder was explored with a silver catheter to make sure that the needle had not gone entirely through the parietes. The ends of the wires, after all had been introduced, were twisted together as in an ordinary silver suture, no clamps, quills, buttons, or the like being used. Some of the stitches were found on their removal to have made a loop of an inch and a quarter in circumference.

The operation being completed, a flexible male catheter was introduced and retained in the bladder by adhesive straps attached to each thigh; it was directed to be removed daily and washed; the urine which escaped by it was received in a long urinal left lying between the thighs. A grain of opium was to be taken every night to constipate the bowels. The diet to be light and nourishing, of broth or chicken. Patient to lie only on her back.

Sept. 18th.—Sutures removed and the catheter dispensed with. Has been perfectly comfortable since the operation.

20th.—Bowels moved without any accident to the fistula, and for the first time since the operation.

22d.—Sits up for the first time.

24th.—Discharged cured, with the advice not to go, for a month to come, longer than two or three hours without evacuating the bladder.

II.—J. B., æt. 35; born in Ireland. Admitted to the Massachusetts General Hospital July 13th, 1864. Confined for the first time ten months since, after a labor of forty-eight hours, and an instrumental delivery, of a dead male child. Ever since her recovery, which was rapid, she has had imperfect control over her urine, although at times able to retain it an hour and to keep herself dry during the day. Has menstruated twice since her confinement, and then but scantily, the last time about two weeks ago. On examination, the parts were found in a healthy and clean condition. The vagina was very much contracted, hardly admitting the forefinger. About an inch within the ostium a stout band, extending from the anterior to the posterior wall, divided the canal into two separate halves and arrested the further entrance of the finger. On dividing this, the fistulous opening was found behind it, small in size, and, as in the preceding case, surrounded by very thin walls. It was situated about midway between the os uteri and the meatus urinarius.

July 17th.—*Operation.*—The patient's bowels having been thoroughly cleared out, ether was given, and she was brought into proper position over the foot of the bed, and before a good light. In order to gain access to the fistula for the purpose of operative procedures, it was necessary to get rid of the constricted condition of the vagina; this was effected by long and pretty deep incisions on each side of the vagina, extending from the os uteri to the labia majora. Annoying, though not serious hæmorrhage followed. An operation similar to that in Case I. was then performed, eight silver sutures being used. The elastic catheter was introduced, and the usual directions given as to diet, opium, &c. A considerable amount of abdominal uneasiness was complained of for two or three days after the operation, and apparently due to the constipation. It disappeared after a few hot external applications.

July 20th.—Free from pain. Eats and sleeps as before operation.

31st.—Bowels opened by enema, the first time since July 17th.

August 1st.—Sits up two hours at a time, without the catheter.

2d.—Stitches removed under ether.

3d.—Catheter dispensed with.

6th.—Discharged cured; no leaking having occurred since the day of the operation.

III.—A. M., æt. 21; widow; born in Boston; mother of two children. Entered Massachusetts General Hospital April 24th, 1864. Four years since was delivered of a living child, by instruments, after sixty hours of labor. Subsequently, by a natural labor, at the seventh month of pregnancy, she was again delivered of a living child. An involuntary escape of urine immediately followed her first confinement and has continued ever since, no portion of the secretion being retained or passing by the urethra. On examination, there was found, three-quarters of an inch in front of the os uteri, a triangular-shaped fistula, large enough to permit the passage of the forefinger, lying at the bottom of a deep depression formed by the inversion of the mucous membrane of the vagina. The neighboring parts were in a healthy condition.

April 26th.—*Operation.*—The bowels having been thoroughly emptied, the vagina was exposed, as in the preceding cases. The sides of the sulcus around the fistula were largely denuded, without increasing the size of the opening itself. This was accomplished by the use of both knife and scissors. Ten sutures of silver wire were then introduced by means of a tubular needle, and three of these were carried through the anterior lip of the os uteri. Although the long diameter of the fistula was antero-posterior, the extent to which the tissues surrounding it were removed permitted the refreshed surfaces to be brought together in a transverse linear wound two and a half inches long. The aperture was effectually closed and the leaking ceased. A gum-elastic male catheter was placed in the urethra, which from long disuse had become contracted; a urinal between the thighs received the urine from the catheter. A grain of opium was directed to be taken at night, and each succeeding night, until otherwise ordered. Bread, milk and broth for diet. Decubitus to be dorsal.

April 28th.—A very considerable hæmorrhage commenced, unattended by any pain or symptoms which the patient herself could ascribe to menstruation; its amount and watery character, though there were some coagula, made it presumable that the urine was escaping by the wound. This continued until May 1st, when it ceased spontaneously. During its occurrence, the flow of urine through the catheter was not interrupted or diminished in quantity, and at no time tinged with blood. As the catamenia had been absent for three months, it would seem, from its history and phenomena, that this hæmorrhage was probably a menstrual one.

April 30th.—Bowels moved in spite of the opium, as also on May 1st, 2d and 4th. The diet was therefore changed to solid food, with beef-steak. Eight grains of subnitrate of bismuth were directed to be given night and morning.

May 6th.—Catheter removed and patient permitted to sit up. Is waked every two hours at night to pass her water, which she does without difficulty. No constitutional disturbance has at any time followed the operation.

10th.—Over-confidence in her capacity to prolong the retention of her urine led her to go last night five hours without being waked. In consequence, after thirteen days of entire absence of leaking, four of which had been passed without any reliance upon the catheter, the escape of urine by the vagina recommenced.

16th.—Stitches removed. Fistulous opening which now remains admits only a female catheter.

June 16th.—Patient re-admitted to the Hospital. Fistula about the same size as at the last report. Its vicinity was again refreshed and the vaginal parietes dissected up into large flaps, which, owing to the tension of the cicatrices of the previous operation, it was found could now only be approximated laterally. Eight silver sutures were introduced. Directions as after the previous operation were given.

30th.—Bowels moved for the first time since the operation. No leaking.

July 5th.—Catheter left out for two hours.

7th.—Stitches removed under ether. Examination reveals a sound, smooth, and perfectly tight cicatrix.

9th.—Sits up all day without the catheter. Wears it only at night.

12th.—Omits catheter altogether. Passes her water three times in the night.

15th.—Discharged cured. At no period during the two operations to which this patient was subjected did she show any symptoms of febrile or inflammatory reaction.

IV.—E. D., æt. 41; wife; born in Ireland. Entered Massachusetts General Hospital Aug. 15th, 1863. In January of the present year was delivered of her first child, a girl, stillborn. The labor lasted three and a half days, and was accomplished without instruments. She kept her bed for three weeks afterwards, and during this period discovered that she could not control the escape of her urine. On examination, a fistula, one third of an inch in diameter, was found about midway between the os uteri and the neck of the bladder.

Aug. 16th.—*Operation.*—The bowels having been well evacuated, the patient being etherized, the vesico-vaginal parietes were punctured, about one-sixteenth of an inch from the margin of the fistula, with a narrow, pointed knife, which, without being withdrawn, was made to remove a ring of tissue, in the centre of which was the aperture constituting the fistula. Three ligatures of waxed silk brought the fresh cut surfaces into exact apposition, the resulting wound being one inch long and transverse in direction. It was ordered that the urine should be drawn every two hours, night and day; that the bowels should be kept constipated by opium, and that the diet should be of broth, vegetables and bread.

Aug. 22d.—Sutures removed. Edges of wound nearly united.

26th.—Patient left the Hospital against advice. In January, 1864, her physician wrote that in the middle of December, he was informed by her that no further inconvenience was experienced, and that she was entirely recovered.

V.—M. E. F.; aged 23; wife; American. Entered Massachusetts General Hospital Nov. 2d, 1863. Confined with her first child under the care of a homœopathic practitioner July 6th, 1863. The physician who recommended this patient to the Hospital, gave the following account of her case:—"The labor, as I understand, was very tedious. I was called in at the end, and found the head entirely free, the shoulders arresting further progress. The attendants told me this state of things had continued for five hours, and that attempts had been made to finish delivery by direct traction on the head and by application of the forceps. I inserted a finger into the axilla and delivered with very little difficulty." Two or three days after the birth of the child, it was apparent that there existed a vesico-vaginal fistula, and on examination, Nov. 4th, an opening into the bladder was found close to the left side of the vagina, about two and a half inches from the meatus of the urethra. This did not exceed one quarter of an inch in diameter, but through it the entire urinary secretion leaked away.

Nov. 5th.—*Operation.*—The edges of the fistula were carefully pared at the greater expense of their vaginal aspect, and in such a manner as not to include in the removal of the margin any portion of vesical mucous membrane. They were then brought together by four silver sutures. These were introduced with difficulty, owing to the lateral position of the fistula, and the narrowness of the vagina. The bowels, which had been opened by a cathartic and an enema prior to the operation, were ordered to be kept constipated by opium. A flexible catheter was introduced and retained in position, and the patient was kept lying upon her back.

11th.—A little leaking.

12th.—Sutures removed. A day or two later the patient returned to her home.

Dec. 11th.—Re-entered Hospital. Reports herself able to hold her water sometimes as long as two hours, always one hour. On examination, the fistula was found reduced to such a size as only to admit the head of an ordinary probe.

13th.—An operation similar to that described in Case No. I., was performed. The flap which was slid over the fistula was so large that nine silver sutures were introduced. These were allowed to remain in place until Dec. 22d, and on the 28th the patient was discharged cured of her infirmity, not a drop of urine having escaped by the wound after the operation was completed. No febrile disturbance followed this or the previous operation. She was cautioned against retaining her water for too long a time, or too soon allowing the approaches of her husband. A letter from this patient in Feb., 1864, confirms the completeness of her recovery.

VI.—B. K., aged 35; wife; born in Ireland, mother of four children. Entered Mass. General Hospital Oct. 17th, 1863. Five weeks before was delivered by instruments of a dead child after twenty-four hours of labor. All her previous children were born without difficulty, so little, "that not even the women in the house would know she was sick." One week after the above-mentioned confinement, she found herself unable to control the escape of her urine, and this disability has gone on increasing for the worse up to the present time. Naturally a robust woman, her sickness and the irritation of the integuments produced by the constant escape of urine, which has excoriated the vulva and insides of the thighs, have greatly reduced her strength. On examination, the entire base of the bladder, from its neck to the os uteri, is found to be deficient, constituting a fistula which permits the admission of three fingers. The superior wall of the bladder makes a hernial protrusion through this opening, and displays a bright-red mucous surface. The irregular borders of the fistula, composed of the contracted remains of the vesico-vaginal septum, are covered with phosphatic deposit. Rest in bed, cleanliness, vaginal injections with an acidulated wash, the free application of glycerine, a nourishing diet, with a bottle of ale daily, brought this unfortunate woman in the course of a week into fit condition for operation.

Oct. 25th.—*Operation.*—The puckered borders of the fistula were unrolled and dissected up from the mucous surface of the interior of the bladder so as to make loose and extensible flaps, and, without any new loss of substance, they were brought together by eight silver sutures. Three of these it was necessary to carry through the superior lip of the os uteri. A flexible catheter was introduced to be retained, and a course of treatment similar to that described in the preceding cases ordered to be observed.

29th.—A little leaking was perceived.

Nov. 3d.—Sutures removed. Three days later the patient returned to her home.

Dec. 22d.—Re-entered Hospital. On examination it was found that the fistula was reduced to a size which only admitted the tip of a female catheter, occupying a position so near the neck of the bladder as almost to encroach upon the urethra. Several days of rest and attention to cleanliness were necessary to bring the patient into a state suitable for a second operation. This was performed Dec. 27th, and in a manner similar to that pursued in Case I., and in the second operation of Case IV. Eight silver sutures were introduced.

Jan. 5th, 1864.—Sutures removed.

6th.—Sitting up. Says she can retain her water half an hour.

A few days later this patient left the Hospital and did not again apply for admission.

Remarks.—The cure of vesico-vaginal fistula by operation is an achievement, the principal honors of which belong to American surgery. It is comparatively but a few years since (1839), that in the Massachusetts General Hospital, one of the earliest, if not the earliest, successful operation for the cure of this infirmity was performed, and two of the principles now deemed essential in its execution were first put in practice by one of its surgeons, the late Dr. George Hayward. These were, passing the sutures so as not to wound the inner surface of the bladder, and, paring the edges of the fistula without involving the vesical mucous membrane. Dr. Hayward also insisted upon the importance of diminishing to a minimum the size of the thread used for sutures, and thus anticipated one of the conditions which subsequently led to the adoption of silver wire in place of silk. These innovations have unquestionably contributed more towards ensuring the success of an operation now so frequently practised with the best results, than any of the numberless ingenious devices which have been suggested at different times within the last few years. That such is the case is shown by the fact that the various modifications of buttons, clamps, bars, &c., heretofore relied upon to assist in holding together the edges of the wound, are now abandoned as unnecessary by those surgeons who have given special attention to details, and who have been most successful in their operations.

Although different points are insisted upon by different individuals as influencing essentially the success of operative treatment, all agree upon the importance of the following:—

1. In forming the flaps or refreshing the edges not to molest the mucous membrane of the bladder. To make the surfaces approximated as broad and extensive as possible.

2. To place the sutures at a long distance from the edges of the wound; not to penetrate the mucous membrane of the bladder; to have no fear of introducing too many; not to remove them until the lapse of ten days, or even a longer period, and to make no digital or instrumental exploration of the wound until the removal of the sutures becomes necessary.

3. To retain a flexible male catheter in position during the treatment. This should have large eyes and be of such a size as to fill the urethra and prevent the escape of urine along its sides. It may conduct to a urinal lying between the patient's thighs (the preferable method), or lead to a vessel outside the bed by means of an elastic tube connected with the end of the catheter. Dependence upon it should be continued for a fortnight.

4. To arrest the action of the bowels by opium until after a cure is effected, or the failure of the operation is decided. One grain every other night will usually accomplish this result.

Although, in the cases above related, these rules were not in each instance fully observed, there was cause for regret whenever their details were disregarded. Case IV., which, from the favorable condition of the parts for an operation, I was tempted to consider so easy of cure as to be amenable to the simple bringing together of its refreshed edges with silk sutures, would, I am convinced, have united by first intention, if, by dissection, broad surfaces had been brought in apposition and silver sutures used. Case III. failed at the first operation only from the too speedy removal of the catheter.

A small fistula is often as difficult to close as a large one; and any operation which requires that the edges should be refreshed tends to enlarge the opening, rather than diminish its size, if the result is unsuccessful. For the suggestion of sliding a flap over the fistula, its edges being left untouched, and which I believe is a valuable method, I am indebted to Dr. S. Cabot. Large fistulæ, as they can hardly be made worse, so far as the patient's condition is concerned, permit unhesitatingly of extensive dissection, while the bringing together of broad and vascular surfaces, thickened by the deposition of lymph, is more likely to lead to union at a first or in a subsequent operation, than when smaller and thinner flaps can alone be made use of. Of the six operations of which a report has been given, five resulted successfully; the sixth only failing perhaps of a final favorable termination from the patient's want of perseverance, the fistula having been reduced from an opening of very large size to one not exceeding the diameter of a silver catheter. No fever or constitutional disturbance followed the operations in any instance; and the only complaint made was of the confinement to one position (on the back). Liberal diet was always allowed from the outset, and "House diet" after the first few days.

The preceding cases, so far as they go, confirm the opinion already supported by statistics, that it is prolonged labor, and not the use of forceps, which most frequently causes vesico-vaginal fistula. The early application of the latter finds, therefore, in this fact, an argument in its favor. Of sixty-two cases of fistula treated at the London Surgical Home, the lesions followed labor of upwards of twenty-four hours in no less than fifty-one instances. Instruments were used in thirty-one of the cases, and in four of these only had the labor been of less than twenty-four hours duration. With some exceptions, the patients had been thirty-six hours or more in labor before the instruments were used. (See *Lancet*, March 5th, 1864.)

Boston, August, 1864.

CASES OF GUN-SHOT WOUNDS.

By John G. Blake, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

The following cases, although presenting nothing very peculiar, yet contain one or two points of interest in connection with the subject of gun-shot wounds. To our professional brethren in the field such cases are of every-day occurrence, but to those who have not their opportunities of enlarged observation, even moderately difficult ones assume a certain importance in their every-day life. The difficulty frequently experienced in tracing the course and detecting the presence of musket or rifle balls is well known, and their extraction is by no means of easy accomplishment. Some writers even recommend that it should not be attempted if the operation necessary to allow extraction requires extensive injury to important structures, and we can readily conceive where such interference would be highly injudicious. These are, however, merely exceptional; the grand rule in military surgery is—when you find the ball, remove it.

Case I.—Lieut. K., Mass. Vols., was struck in the neck, during one of the battles about the middle of May, fought in the vicinity of the Wilderness, in the movement towards Richmond under General

Grant. He was standing a few steps below the officer next in command. Both were wounded and fell at the same instant, and were carried to the same hospital. It was evident the same ball had struck them. The injuries of the officer first hit consisted of fracture of the left lower jaw and a severe flesh wound of the shoulder of the same side, as if the weapon had been fired from an eminence and the ball had taken an obliquely downward direction, passing through his jaw and shoulder, thence into the neck of the other, entering about the middle of the right sterno-mastoid muscle an inch from its inner edge.

In a few days Lieut. K. was sent to Washington, and entered one of the hospitals set apart for the reception of wounded officers, and for the first time had a careful exploration of the wound made. The surgeon in charge was unable to find the ball; one or two gave as their opinion that it was a mere flesh wound, and contained none. He was under treatment here for three weeks, and finding no improvement, applied for leave to come to his home in this city. I saw him a few days afterwards, and, at his request, made a careful examination of his wound. The neck was swollen, painful, tender over upper part of back and cervical region, quite stiff, compelling him to carry his head in a constrained position, and making him look very much like a severe case of torticollis. There was a crescentic-shaped wound in the skin at the point above mentioned, from which healthy pus exuded freely on slight pressure on the parts around. A probe introduced into this passed a couple of inches in several directions, and when carefully handled could be made to penetrate between five or six inches in a direction obliquely backwards and downwards towards the spine. It was pretty evident something had passed in this direction, and though at the first and second examinations no foreign body was detected, I felt confident that when he was under the influence of ether a different result would ensue. Once or twice in probing I felt something which sounded like carious bone. Two or three days after, I gave him ether, made a free exploration, and felt the bullet deep in the muscles near the seventh cervical vertebra. I cut down upon and removed it without much difficulty. No bleeding of any consequence followed. The wound was dressed with cold water for a few days, and then a poultice. In about three weeks both were nearly healed. The ball was of the conical shape (Minié), was much flattened, deeply grooved on one side, and presenting a couple of sharp projections. When last seen, the patient was perfectly well.

Case II.—Capt. R., Mass. Vols., while passing through a street in one of our Southern cities, was accidentally shot in the foot with a revolver. Previous to this he had been five times wounded in battle, losing his right arm near the shoulder at Ball's Bluff, afterwards at Mechanicsville, Malvern Hill, and twice slightly in other engagements. The ball passed through his boot, entered the anterior part of the foot near the metatarso-phalangeal articulation, passed through the bones and disappeared. He was removed to a hotel, and surgical attendance procured. The wound was probed, but the ball could not be felt. The usual dressings were applied, and continued for four weeks; repeated examinations failed to detect the position of the missile. The foot became swollen and painful; suppuration was profuse, and he dreaded the loss of his limb. Small bits of bone became detached and were removed from time to time, but his general health was declining, and not feeling satisfied with the treatment he was receiving, he wrote to me, and I advised him to come North, if he thought his health was sufficiently good to allow him to travel. Soon afterwards he arrived here, and I was afforded an opportunity of examining his foot. There was very considerable swelling of the foot and ankle, with tenderness to the touch; there was free suppuration, and small sinuses extended in various directions. A probe passed readily through the track of the ball, coming in contact with denuded bone at one or two points, but did not reach the ball. After a few days rest and tonic treatment. when he had recovered from the fatigue of his journey, I recommended a consultation with one or two of our Hospital surgeons, and operation if thought advisable. To this he assented, and a day was named; but something occurred in the interval and it was postponed. At his urgent request, I one day etherized him, removed a few small fragments of dead bone, and while probing the wound and tracing a sinus back to the heel, I felt my probe bring up against something which communicated a dull metallic sensation. I immediately cut through the skin, and after a little time succeeded in drawing out the ball from its fibrous bed in the tissues around the insertion of the plantar fascia. It was a small, conical revolver ball, much flattened and misshapen.

After this he improved rapidly. The fear of losing his foot was, he declared, removed with the ball. In a month he was up and moving around, with the assistance of a crutch, and this he soon exchanged for a walking stick. For two months more he was lame, and several sinuses continued to discharge, but finally all healed and he was able to walk without assistance.

He is now serving his country in the invalid corps, and in the recent rebel raid rendered important service with his company in guarding a part of the only railroad track connecting Washington with the North. A recent letter informs me that he is perfectly well in every respect.

Boston, August, 1864.

A NEW Medical College has been established at Cleveland, Ohio, under the title of the "Cleveland Hospital Medical College." Dr. Weber (Surgeon-General of the State under Gov. Tod) takes the chair of Civil and Military Surgery, and the other professorial chairs are occupied by eminent members of the profession.

LUMINOUS EYES.

By Prof. K. Stellwag Von Carion.

[Translated from the Wiener Med. Wochenschrift, 1864, pp. 145, 161, 177.]

The fundus oculi reflects light both in a regular and irregular manner. Of the former we have an example in the peculiar shining of the eye in dogs or cats; of the latter, in the light reflected back to the observer with the ophthalmoscope. After describing the structure of the tapetum, to which the lustre of an animal's eye is principally due, the author passes to the similar phenomenon in the human eye. So far as he is aware, Fermin, who saw it in 1796 in an albino, was the first to mention it, and J. Beer the first to pay any particular attention to it. The latter considers it to be immediately owing to a pathological disappearance of the choroidal pigment (cats'-eye amaurosis). This appearance soon came to be considered a symptom of medullary cancer of the retina. The assertion is quite correct, that such a disease at an early period frequently produces exactly similar reflections to those described by Beer; for cancer is wont to occur as an infiltration, which distends a greater or less part of the retina into a thick layer. Now, as the latter covers the pigment-layer of the choroid, and, owing to its little transparency and light color, diffuses and reflects a large amount of the incident light, the fundus becomes illuminated and appears red, whitish-red, or whitish, according to the vascularity of the new formation. Moreover, as the tumor grows, it passes more and more within the focus of the media, and therefore is seen in an erect and magnified image —the vessels, little elevations, &c., becoming distinctly visible. Finally, light is regularly reflected by the surface of the tumor; the eye becomes luminous when towards dusk it is placed in a certain position with reference to the light and to the observer, the morbid product taking the place of the tapetum in an animal's eye.

The observations of Travers, Ammon, and others, showed that sometimes after this symptom had been observed the eyeball gradually become softer and atrophic. This was at first explained by the supposition that the supposed cancer had undergone a retrograde metamorphosis—a supposition which was, however, proved to be incorrect by Chelius. Now-a-days, it is known that in such cases the tumors are of inflammatory origin, that they are formed of connective tissue, and that they usually proceed from the choroid, although in exceptional instances, they may be primarily developed in the retina. Such tumors constantly end by suppuration or atrophy; they, of course, destroy the eye, but do not, like cancer, destroy the patient. They now pass under the title of sarcomatous tumors.

It must not be imagined that the lustre is a constant symptom, either of cancer or sarcoma; its occurrence depends on certain conditions. In the first place, the surface of the tumor must be of a light color, and not too rough. In sarcomatous tumors of the choroid, which contain a large quantity of pigment, or which are covered by the unaltered pigment-layer of the choroid, and intra-ocular melanosis, no lustre is observed. Stellwag also believes that there is no lustre in cases of sarcoma or cancer where the surface projecting into the vitreous body is very irregular and vascular. For choroidal tumors to regularly reflect light there is another condition: the retina must have either been ruptured, or be stretched as a tense and even membrane. This phenomenon is not found in cases of separation of the retina from the surface of the tumor by serous fluid, or, indeed, in the ordinary cases of retinal separation, for the membrane is too transparent to act efficiently as a mirror, and yet too opaque to allow sufficient light to pass to the surface of any subjacent tumor.

This phenomenon seems to be specially promoted by a light-colored choroidal tumor pressing the retina forwards, so as to apply it exactly to the posterior surface of the lens. The author has scarcely ever seen it so beautifully as in an albino, two and a half years old, whose right eye was affected in the manner just mentioned. Even in a well-lighted room there was a very marked mother-of-pearl lustre, but in semi-darkness the eye emitted truly brilliant bluish and yellowish reflections, whilst the left eye sparkled of a ruby-red. In the right eye the cornea was perfectly transparent—the iris reduced to an extremely narrow, brownish-black, immovable border; the pellucid lens was in contact with the cornea, and its posterior surface was completely covered by the retina. The latter was very opaque, and of a greyish-yellow color; here and there were bluish-white stripes, and spots containing masses of cholesterine. A light-colored tumor situated behind it appeared as if covered by a thick veil. The eye was already atrophying.

A separated retina may cause such a peculiar reflection under less favorable circumstances, provided it is thickened and transformed into a dense, tendinous mass; an example of this has been furnished by Alfred Gräfe (*Ophth. Review*, i., p. 160).

There has been some doubt as to the nature of the affection described by Beer as "cats'-eye amaurosis." Himly refers it to absorption of the choroidal pigment, and supports his view by the light color of the fundus oculi and the lustre observed in albinos. It is true that some observers have not noticed the latter appearance, probably owing to their neglect of the conditions under which it can be seen. If an albino is placed in a partially darkened room opposite a moderately distant window or lamp, a properly placed observer will scarcely ever fail to perceive the lustre—only, indeed, when the pupil cannot dilate. The author considers rapidly advancing myopia to have been the essential lesion in Beer's cases; the extreme atrophy of the choroid and consequent exposure of the sclerotic very much conduce to the production of the lustre; and the author can, from his own experience, affirm that it may always be seen in the most brilliant manner in such cases, provided the external conditions of the phenomenon are fulfilled. Even if there is only a posterior staphyloma, or if the surrounding choroid is but little atrophied, the phenomenon can always be perceived, provided the pupil is well dilated and the eye properly directed with reference to the lamp.

As this lustre could be perceived where the staphyloma was but small, it appeared probable that it might also be seen in cases of fibrous degeneration of the optic disc. This supposition was confirmed by the examination of a number of such cases; indeed, the lustre was very marked. The ophthalmoscope showed in the mass of these cases that the choroid was quite normal, the atrophy of the optic nerve being a consequence of simple neuritis optica, or depending on cerebral amaurosis. In one case there was an old and very characteristic glaucomatous excavation.

The same lustre may be seen in normal eyes: it is very difficult to render it apparent so long as the pupil is contracted, but if full dilatation is effected by the use of atropine, there is not much trouble. For the same reason, it is a constant symptom where there is a congenital absence of the iris.

From what has been said, there can be no great difficulty in determining what is the part that takes the place of a mirror. If the choroidal pigment is entire, the room must be darkened, the lamp placed at a distance of several feet from the eye to be examined, and the observer must place a screen between himself and the flame, so that he may look almost exactly in the same direction; at the same time, the eye observed must be directed somewhat inwards. This is the only position in which the lustre is observed. The experiment is much facilitated by full dilatation of the pupil. It is hence evident that there is in the normally-pigmented fundus, no considerable surface which can act as a speculum; the opinion that the optic disc is the reflector appears to be confirmed by the fact already mentioned, that the lustre is more readily observed when the nerve has undergone fibrous degeneration.

Where, from any morbid process, the choroidal pigment has been extensively destroyed, the exposed sclerotic takes the place of the tapetum. For exactly analogous reasons, the lustre is very marked, and very readily perceived in albinos.

Retinal cancers, light-colored choroidal tumors, fibrous degenerations of the separated retina, very closely resemble the tapetum in their physical qualities.—*Ophthalmic Review.*

Dr. Gutzeit, of Riga, recommends the following ointment as the sole treatment of simple carbuncle—viz., half a drachm of opium mixed up with two ounces of white ointment, spread as thick as the back of a knife on linen rag, and applied to the tumor and its circumference three or four times daily.—*Am. Med. Times.*

Bibliographical Notices.

Medical Diagnosis, with special reference to Practical Medicine. A Guide to the Knowledge and Discrimination of Diseases. By J. M. A. Da Costa, M.D., Lecturer on Clinical Medicine, and Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Pathological Society of Philadelphia, &c. Illustrated with Engravings on Wood. Philadelphia: J. B. Lippincott & Co. 1864.

Accuracy of diagnosis at the present day is getting to be felt to be the all-important requisite of the conscientious physician. Indeed, this has always been the main distinction between the man of science and the mere professional hack, whose principal motive it is to get all the fees possible with the least labor. But there are epochs in our science, as in all others, when a rapid advance is made by the labors of earnest seekers, resulting in permanent acquisitions to our sum of exact knowledge, which substitute clearness and precision of diagnosis and greater positiveness in prognosis for vagueness, speculation and groping in the dark. The present century is distinguished for such an advance, and the practitioner who would keep up with the progress of discovery finds it no easy thing to do in the midst of his daily labors and cares. As a profession physicians really have not the time to do this. They must depend upon the labors of certain favored members of their calling to digest for them the vast mass of cumulative knowledge with which every week the medical press is teeming, to codify it, as it were, and present it in a condensed, practical form for consultation. Out of this need grows the call for such works as this of Dr. Da Costa.

The volume before us is introduced in an almost deprecating way by its author, as intended merely for advanced students or recent graduates in medicine. But sure we are that the great body of the profession will find it both profitable and interesting. It well meets the want referred to above, giving the reader in a brief space the sum of exact knowledge at the present time with regard to the diagnosis of the principal diseases he may be called on to treat. It is not a hand-book of general practice, calculated to satisfy the wants of an indolent ambition, and furnish in itself the whole medical library of a professional dunce. It leaves almost out of sight the whole matter of treatment, and is chiefly concerned with signs and symptoms. In some instances a summary of treatment is given, and an occasional record of a case; but this is rather the exception to the general plan of the work.

Instead of following the usual pathological classification in the arrangement of his work, the author has adopted the plan of grouping diseases according to their symptoms, thus giving it a greater practical interest, and aiding in elucidating the differential diagnosis. After the introductory pages on the subject of the examination of patients, and the significance of general symptoms, therefore, he proceeds to take up the principal divisions of the body, the head, chest and abdomen in turn, with their contents, sketching in a distinct manner the diseases to which they are liable. Next follows a chapter on the urine and diseases of the urinary organs; then come Dropsy, Diseases of the Blood, Rheumatism and Gout, Fevers, Diseases of the Skin, Poisons and Parasites.

In the case of each disease treated of, Dr. Da Costa gives first a clear and forcible description of it. He then takes up in regular order all the forms of disease with which it may possibly be confounded, indicating in plain and precise language the main points of differential diagnosis. The manner in which this is done is highly satisfactory. In the portion of the work devoted to pulmonary diseases use is made of diagrams, which represent vividly to the eye the physical conditions addressed to the ear of the auscultator. The physical signs are also grouped together in tables, so that the student may see at a glance those which exist together, and contrast each set with the others. The chapter on the urine and urinary diseases we would specially commend to our readers as giving in a compact form information which is much less generally in the possession of the profession at large than it should be. This chapter contains a very useful table of the main re-agents employed in the examination of the urine, which cannot fail to be of great value to physicians in active practice; it is also illustrated with excellent wood-cuts.

Such is the general character of Dr. Da Costa's work. We cannot too highly commend it to our readers; we believe it is destined to hold a permanent place in American Medical Literature. Of its mechanical execution, we can only say that it is most admirable. Excellent paper, softly tinted, large and clear type, numerous wood-cuts of the best character (all original, we are happy to say), with a most copious index, make this volume of some seven hundred pages all that could be desired on the score of convenience and elegance.

A Treatise on Pharmacy. Designed as a Text-book for the Student, and as a Guide for the Physician and Pharmaceutist. Containing the Officinal and many Unofficinal Formulas and numerous Examples of Extemporaneous Prescriptions. By Edward Parrish, Member of the Academy of Natural Sciences of Philadelphia, Principal of the School of Practical Pharmacy, Philadelphia, &c. &c. Third Edition, thoroughly revised and improved, with important additions. With two hundred and thirty-eight Illustrations. 8vo. Pp. 850. Philadelphia: Blanchard and Lea.

The present edition of this valuable work meets a want which has been for some time felt, the previous edition having been out of print for nearly a year. The delay is fully compensated for by the numerous additions which it has enabled the author to give from the revised edition of the National Pharmacopœia. The chemical portions of the work have also been brought up to the existing state of science by Prof. J. M. Maisch. The completeness of this treatise may be seen by a glance at its table of contents. Part I., in three Chapters, treats of the various implements and furniture required in the dispensing shop, the various weights and measures and specific gravity. Part II., of Galenical Pharmacy, so called; that is, of the various vegetable products used in Pharmacy, with full directions for their collection and preservation, and minute instructions with regard to the various methods employed for extracting their medicinal virtues or preparing them for officinal use. This fills 17 chapters, and is very elaborate and instructive in its details. Part III. treats of Inorganic Pharmaceutical Chemistry, in ten chapters. These relate to the purely chemical processes of pharmacy, and to the various mineral substances used in medicine, with a full account of the various preparations, salts, &c., obtained from them, which are used in modern practice. Part IV. relates to Pharmacy in its relation to Organic Chemistry, a term which explains itself, the various organic substances occupying the place of the inorganic in Part III. This part is divided into nine chapters. Part V. treats of Extemporaneous Pharmacy, and contains the whole mystery of dispensing medicines, combining and preparing them in all the various forms prescribed by physicians—slightly verging on the domain of the latter by the numerous formulæ which it supplies of prescriptions for various complaints. This fills eight chapters. An Appendix contains some very judicious advice on the management of the sick chamber, and directions for preparing a number of articles of diet for the sick. For the benefit of country practitioners, who are obliged to dispense their own medicines, several tables of drugs are given, showing how many and how much may be supplied as an outfit for a given sum of money—from twenty-five to one hundred dollars. A copious index of twenty-two pages, three columns to the page, completes this excellent work. It is printed in large and clear type, and the numerous wood-cuts are all that could be desired. To the practical druggist it is indispensable, and if it were on the table of every practising physician fewer unwise and unprofitable prescriptions would be written, and exactness and method would become the rule instead of the exception in these matters, to the greater comfort of the sick as well as the dispensing druggist.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, AUGUST 11, 1864.

American Medical Association.—The time would seem to have come when a new spirit needs to be infused into our national Association or a new organization to be adopted, in order that the principles on which it was originally based may be sustained and lead to valuable practical results. It must be evident to any one who has read the proceedings of the last annual meeting, that it was not, as a whole, of a character calculated to sustain the reputation of a society claiming to be the highest professional authority of the country, or such as to make future meetings, if similarly conducted, an inducement to gentlemen at any great distance from the place of assembly to attend them. Doubtless the distracted condition of the country had something to do with the unsatisfactory nature of the meeting recently held, but there were very obvious features in it, some of which are of too frequent occurrence to be exceptional, urgently calling for reform.

The election of President for the present year was characterized by much that was unpleasant and out of place. It is very apparent to us, that other things being equal, or even if they are not equal, it is of the first importance that this officer should be chosen, if possible, from the members of the profession resident at the place of meeting. To the public at large the compliment thus paid to some well-known and respected practitioner would have great weight in enlisting their sympathies, and calling forth those kindly displays of courtesy and hospitality which are of so much importance to the complete success of these meetings. We think this is a matter of special significance in our country, where the delegates to the annual sessions come from very widely separated districts, and most of whom are thus quite unknown to the community where they are guests. It gives an opportunity to the Association to confer a merited honor on some conspicuous member, and effectually sets aside many of the petty influences and cabals which otherwise are likely at any meeting to introduce a most unwelcome element of discord and ill will. We make these remarks solely on general grounds, without any reference whatever to the gentleman chosen to preside for the current year, and who, certainly, on general principles had very strong claims to the office. It is very plain that there was much disappointment felt in New York that a venerable and distinguished surgeon of that city was not elected President. Whether this had anything to do with the circumstance or not, it was very noticeable that many of the most eminent medical men there resident took no part in the business of the meeting.

Again, it is very plain that the time of these meetings is wasted most lamentably in merely parliamentary discussions and disputes. Very important matters thus fail of getting a hearing at all. It may be, probably it is, the fact that this is an evil inherent in the very organization of the Association. It is too much to expect that a meeting of some hundreds of delegates, from all parts of the country, can accomplish much valuable work in three or four days, where the temptation is so strong to give a loose rein to the national proclivity of the gift of speech. It seems to us, therefore, that this evil can only be remedied by a thorough reconstruction of the Association, by which the number of delegates may be greatly reduced, and only the strongest men of the profession be allowed to hold that position. Let them be chosen by each State Medical Society, and let the sessions be prolonged, for weeks if need be, until some definite useful measures of medical reform may be deliberately considered and acted upon. Let it be distinctly understood before hand what measures shall come under consideration, so that the minds of the delegates may be in a state of preparation for them. Such a convention would be a working one, and we should not be likely to witness the now too frequent spectacle of committees to whom very serious matters are assigned, chosen without the knowledge or assent of the gentlemen composing them, often when they are hundreds of miles away, and answering year after year to the call upon them, "not ready to report." Is it objected that this would materially interfere with what some regard as the main object of these meetings, namely, the social reunion of the members of the profession from every State, and the cultivation of kindly sympathies and mutual acquaintance? This might be accomplished by less frequent meetings, somewhat of the nature of our large political conventions, of members elected from smaller medical organizations in much larger numbers, and without that special reference to legislative fitness which ought to characterize a working representative body, whose business is wise and sober deliberation and efficient action.

Such a plan of organization would, it is true, be somewhat distasteful to some aspirants to the honor of reading papers before the Association at its annual meetings. We are not of the number who regard this as the most important object of the meetings, by any means. Let the unread volumes of its publications of past years bear witness how little as a whole they have contributed to the permanent literature of the profession. Papers, however, might be submitted to the Association, as they are to many other scientific bodies--read by title perhaps, or in abstract, and referred to a competent committee, so that only those of really permanent value should receive the sanction of publication.

We sincerely hope that *some* measures of reform in the Association may be adopted ; for we know we express the feeling of many of the ablest of our professional brethren in saying that it falls far short of what it should be, and that the interest with which it was originally organized is fast dying out among them.

Improved Army Rations.—We are glad to hear that the improved army rations suggested by Prof. Horsford, whose interesting pamphlet we noticed some weeks since, are likely to have a fair trial in the field.

The *Ohio Medical and Surgical Journal* for July publishes the interesting paper on Spontaneous Thrombosis, which we copied from the London *Medical Times and Gazette*, with our editorial comments appended in full, as if the latter were original with that Journal!

Correction.—In an article on the Responsibility of Physicians in Confidential Cases, published in this Journal of June 30th, we stated —in the first case given as an illustration—that the suit referred to was withdrawn when it was found that the gentleman alluded to was prepared to meet his accuser in court. We have since learned that the suit was withdrawn on a full and explicit denial on his part that he had made the charges alleged in the suit.

Sudden Death ; Clot in the Heart.—A man, aged 36, exhausted by caries of the vertebræ and psoas abscess, on getting out of bed, fell down insensible, and expired soon afterwards. During the day he had complained of general indisposition, and had refused his food, but nothing was observed to excite suspicion of approaching death.

A large, pale, firm, fibrinous deposit was found in the right cavities of the heart, extending into the pulmonary artery. It was strongly adherent to the appendix of the auricle and apex of the ventricle. From either of these two points the whole weight of the heart could be made to depend without its tearing through. Transverse bands of fibrin passed from the clot to the ventricular walls. So closely was it attached, that even when considerable force was employed to remove it, portions were left behind.—*London Lancet.*

All applicants for commissions as Surgeons and Assistant Surgeons in Colored Regiments who may go to Louisville, Ky., to report themselves to Brig. Gen. Thomas, have been ordered to report themselves to Col. R. C. Wood, U.S.A., Assistant Surgeon-General, for examination. Of those who may pass a satisfactory examination, five Surgeons and twenty-six Assistant Surgeons will be instructed by the Colonel to report in person to Bvt. Maj. Gen. Burbridge at Lexington, Ky., for assignment to regiments.—*Am. Med. Times.*

The twelfth annual meeting of the American Pharmaceutical Association will be held in Cincinnati on the 21st of September.

Successful cases of the treatment of smallpox by the *sarracenia purpurea* are reported as having occurred among the inmates of the State Alms House in Palmer, Mass.

A new building, at an expense of $25,000, has been attached to the old one belonging to the Medical Department of the University of Michigan. It contains two lecture rooms capable of accommodating over 500 students each.

A monument is about to be erected in England in memory of Sir Humphrey Davy. Funds to the amount of £1,400 have already been collected.

The well-known inventor of the Palmer Leg, B. Frank Palmer, Esq., has recently had the degree of Doctor of Laws conferred on him by the Western University of Pennsylvania.

Among the names of distinguished members of the profession abroad whose deaths are recently recorded, are those of Prof. James Miller of the University of Edinburgh, and Dr. Robert Johns of Dublin.

Great efforts seem to be making in London to secure subscriptions among the profession for the contemplated memorial to young Llewellyn, surgeon of the Alabama, who lost his life in attending to the wounded crew after the action with the Kearsage.

The total number of insane people in Scotland, officially known on the 1st of January, 1863, was 6327. In former years it has been shown that besides those officially reported, 2,000 lunatics were resident in private dwellings and maintained from private resources.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, August 6th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	62	74	136
Ave. mortality of corresponding weeks for ten years, 1853—1863,	55.5	52.6	108.1
Average corrected to increased population - - - -	00	00	118.97
Death of persons above 90 - - - - - - -	0	0	0

Deaths in Boston for the week ending Saturday noon, Aug. 6th, 136. Males, 62—Females, 74.—Accident, 2—disease of the bowels, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 4—cancer, 2—cholera infantum, 29—consumption, 18—convulsions, 6—croup, 1—debility, 1—diarrhœa, 9—diphtheria, 3—dropsy, 1—dropsy of the brain, 1—drowned, 1—dysentery, 8—scarlet fever, 3—typhoid fever, 1—gangrene, 1—gastritis, 1—hæmorrhage of the bowels, 1—lencocythemia, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 6—measles, 2—old age, 2—paralysis, 2—premature birth, 2—rheumatism, 1—smallpox, 6—spina bifida, 1—unknown, 11—inflammation of the uterus, 1.

Under 5 years of age, 70—between 5 and 20 years, 14—between 20 and 40 years, 18—between 40 and 60 years, 22—above 60 years, 12. Born in the United States, 101—Ireland, 24—other places, 11.

THE

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DESCRIPTION OF AN ANENCEPHALOUS FŒTUS WITH UNUSUAL MALFORMATION.

[Read before the Boston Society for Medical Improvement, June 27th, 1864, and communicated for the Boston Medical and Surgical Journal.]

By Jeffries Wyman, M.D., of Cambridge.

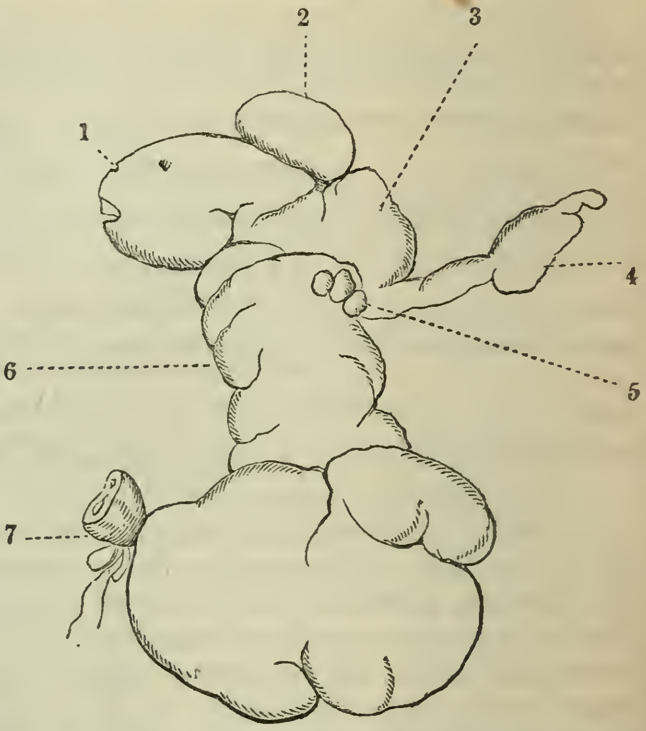
The specimen was sent by Dr. Charles W. Parsons, of Providence, R. I., with the following account of the case:—

A young Irish woman was delivered of her first child on the 11th of October last. There was nothing abnormal in the labor. In delivering the placenta, Dr. P. noticed a harder substance adhering to it. There was no unusual hæmorrhage. The placenta came into the vagina by the efforts of the uterus, and was delivered about twenty minutes after the child. A hard substance was attached to one edge, and covered by the same amnion. The parts tied by a small string ran directly to the umbilical cord, a vein being distinctly seen running from that place along the fœtal surface of the placenta to the cord. The cord was attached somewhat to that side of the centre of the placenta. Towards the same edge of the placenta was a cyst containing what appeared to be rudiments of an ovum. About half an ounce of liquid flowed from the cyst. The specimen was easily detached, and seemed to have no organized connection with the placenta, except through this quasi umbilical cord and the membranes.

The general appearance of the fœtus will be understood by reference to Fig. I. It measured about three inches in each of its two principal diameters. The head, which was very ill defined, was covered by a thin cuticle; the lips scarcely projected, and were drawn tightly over the jaws, leaving the upper one slightly exposed; there was only a single small nostril (1), which opened into a single nasal cavity having no connection with the mouth; in the place of the eyes were two foldings of the skin inwards, provided with eye-lashes, but covering neither the coats nor humors of an eye. There were neither ears nor outer ear-openings; on the right side, near the place of the ear, were two vertical slits, somewhat resembling bronchial fissures, which, however, only extended through the integuments. The head was surmounted by an oval sac (2) containing disintegrated cerebral substance; the floor of the sac was formed by the base of the cranium.

Behind, and not easily distinguished from the head, was a fleshy and somewhat solid mass (3), supporting a rudimentary limb (4), which ended in an imperfectly formed foot provided with a single toe. Near the base of this limb were three conical tubercles (5), which looked like rudiments of toes, though they contained neither bone nor cartilage.

Fig. I.



To the under side of the body thus formed, there hung a large pedicle (6), the only part of the fœtus covered with normal skin, which supported a rounded mass, to which the umbilical cord (7) was attached, and which contained the intestinal canal.

Cranium.—All of the bones were greatly deformed; the upper and lower jaws were co-ossified into a single piece (Fig. II., 1). A triangular groove, the trace of an intermaxillary suture, marked the outline of a single intermaxillary bone, and this contained a single incisive alveolus. A series of small and irregular bones occupied the places of the frontals, lachrymals and malars; there were no nasals. A wide opening existed in the cranial vault between the two parietals (2) and the occipital (3). The base of the cranium was made up chiefly of two nearly spherical petrous bones, that on the right side having an internal auditory opening. After the soft parts were removed an opening was made between the nostrils and the back part of the mouth.

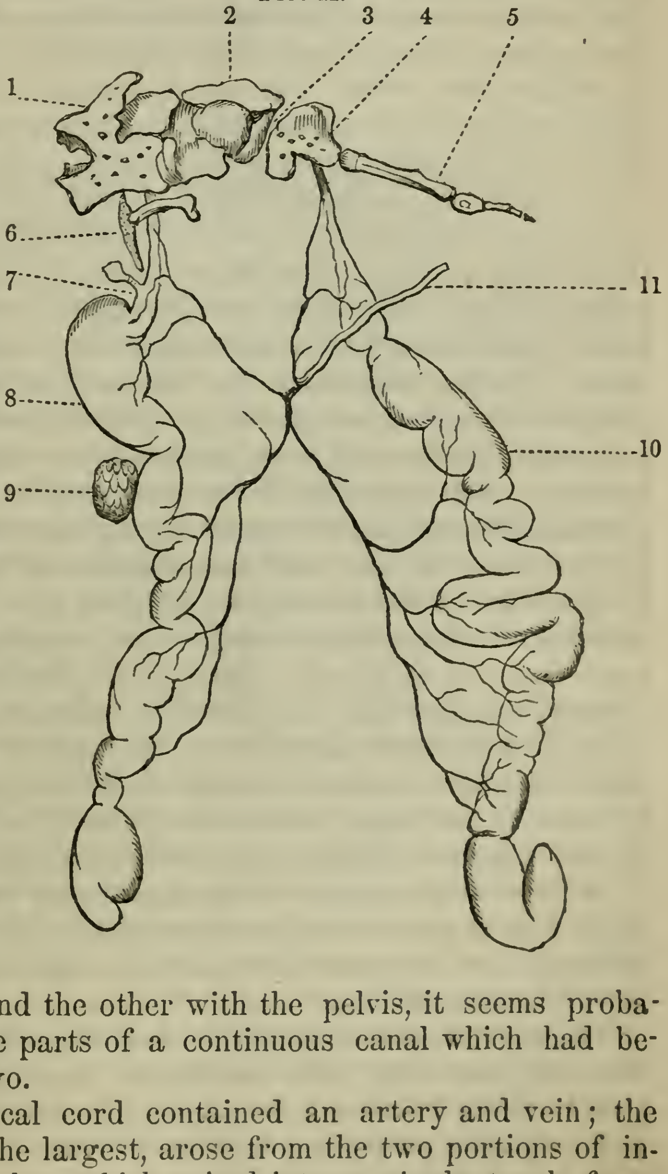
Pelvis and limb.—The mass previously mentioned (Fig. I., 3) contained two pieces of bone, one of which was obviously an ilium (Fig. II., 4), and had loosely attached to it, without, however, forming a distinct articulation, a single long bone (5), having an epiphysis at the upper end, and at the other supporting a piece of cartilage containing a bony nodule, and ending in a single toe with three phalanges.

There were no portions of a *vertebral column.* The *sternum* was represented by a triangular piece of cartilage (6), attached above to the base of the cranium and supporting on either side a pair of well ossified *ribs.*

The bony portions already described were the only parts of a skeleton recognized.

Viscera.—The pedicle and sac attached to the under side of the body contained the following organs:—1st, an œsophagus (7), ending above in a cul de sac which was attached to the base of the cranium; from the fore part of it, near its lower end, grew a fleshy body, supported by a few cartilaginous rings; this was probably the rudiment of a lung: 2d, a well-formed stomach (8): 3d, a portion of intestine ending in a blind pouch; near the pyloric end of this intestine was a lobulated glandular organ (9), in structure resembling a pancreas: 4th, another portion of intestine (10), disconnected with that just mentioned, also ending, both above and below, in a cul de sac; it resembled a colon in structure, and was attached to the pelvis. These two portions of intestine were each about six inches in length, and from the fact that one was connected with the head and the other with the pelvis, it seems probable that they once were parts of a continuous canal which had become separated into two.

FIG. II.



Vessels.—The umbilical cord contained an artery and vein; the latter (11) was much the largest, arose from the two portions of intestine by several branches, which united into a single trunk, forming a cross as they came together from above and below on each side. There was no *heart.*

Genital Organs.—On each side of the umbilicus, and closely connected with the integuments, was a small testis, each having an epididymis, but no *vas deferens.*

All the organs described above were united into a single mass by a fibrinous exudation, and thus the peritoneal cavity was obliterated.

A case in many respects resembling the above is described in Müller's Archives, 1837, p. 328, by Dr. Nicholson.

A specimen described by Otto (*Monstrorum sex centorum Descriptio Anatomica*, Tab. ix., Fig. 2), appears to belong to the same class as the preceding, though the deformity is very much less. The viscera are contained in a large abdominal pouch, the vertebral column is very short and incomplete, the cranium is more perfect, and the four limbs were present, though somewhat deformed.

"POTT'S DISEASE," OR CARIES OF THE SPINE.

[Communicated for the Boston Medical and Surgical Journal.]

Case VII.*—Carrie, daughter of Mr. C. B. A., of Worcester, 5 years of age. This case was first placed under my care in February, 1862, through the courtesy of Dr. Joseph Sargent, of Worcester. In this case there was both angular and lateral curvature, which had been of more than two years duration. The angular curvature had commenced first, involving the 9th, 10th and 11th dorsal vertebræ; this increased for several months, when the body began to incline rapidly to the right side, producing an extensive lateral curvature, so that the child was obliged to rest the right hand upon the knee in order to support herself; this position—necessary in standing—had rotated the spine upon its axis, so that it was twisted more than one eighth of a circle upon itself, and it was impossible for her to assume the erect position unless supported. The general health had suffered considerably; the patient was easily fatigued by slight exertion, and there was much difficulty experienced from compression of the lungs, so that the difficulty of breathing was one of the most urgent symptoms that demanded relief.

Some months previous to my first seeing the patient, she had suffered from a severe attack of congestion of the lungs, threatening suffocation, which was relieved by the application of a blister over the diseased vertebræ.

The case seemed unpromising from the complicated nature of the deformity, involving both the angular form of curvature—which projected nearly three inches posteriorly—and the lateral curvature, which, though occurring subsequently to the former, produced the greater deformity; and also the rotation, or twisting of the spine, which is a common accompaniment of lateral curvature. It was with extreme difficulty that an apparatus, adapted to meet these indications, was fitted to the patient; but these difficulties were overcome, and by fitting an apparatus, similar to that used in the preceding cases, both the angular and lateral curvatures were arrested and relieved. The difficulty of breathing was relieved, and the child was not so easily fatigued as formerly. The lateral curvature yielded slowly at first, but afterwards more rapidly, so that at the present time the child has recovered from it entirely, and stands perfectly erect without being supported; the rotation, or twisting of the spine, is almost entirely remedied. Part of the angular curvature still remains, though it has diminished to a considerable extent, and will probably continue to do so, so that eventually there will be but little trace of the original deformity.

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* Cases V. and VI. were reported July 7th, 1864.

I instance this case on account of the complication and extent of the deformity, which has been much greater than in almost any other case that I have met with. This rotation, or twisting of the spine, was first described by Dr. Dods, of Bath, England, in 1824, previous to which time it had not been noticed, or at least no one had described it. It results, unquestionably, from the attempt, on the part of the patient, to restore the equilibrium which has been lost by the inclination of the body to one side, and, to a certain extent, it compensates for the lateral curvature. In many cases, where lateral curvature exists, this rotation of the spine upon its axis conceals, to a great extent, the existing deformity, and the obscure muscular pains are attributed to almost any cause but the true one. Lateral curvature is more frequently met with as uncomplicated with caries, or "Pott's disease" of the spine, and in such cases it is more easily arrested and reduced; as a simple lateral curvature is more amenable to treatment than where it supervenes upon angular curvature, or caries of the vertebræ.

Case VIII.—Clara, daughter of Mr. W. M. C., of Thomaston, Me. I first saw this case in October, 1861. The child was then 5 years of age; there was a prominent angular curvature, involving the 3d, 4th and 5th cervical vertebræ, of two years' duration. There was great deformity of the chest, with the ribs flattened laterally and the sternum projecting quite prominently, producing such a form as is usually found in connection with extensive curvature in the upper portion of the spinal column. As the curvature had increased, the head had settled downward and forward, and rested upon the chest and between the shoulders; there was great incurvation, or hollowing in, of the dorsal and lumbar vertebræ. She was emaciated and prostrate, with all the nervous symptoms usually attendant upon such cases. There was much difficulty of breathing, and the almost constant neuralgic pains in the chest had, through the suffering they caused, materially affected the general health. The countenance had assumed a pinched and anxious expression, such as is usually observed in the advanced stage of chronic disease in children. Any method of treatment seemed attended with difficulty, on account of the extreme nervous irritability which characterized the case. The curvature had been produced by the weight of the head resting upon the diseased cervical vertebræ, and the first indication of treatment was to relieve this pressure upon the point of disease. The deformity of the lower portion of the spinal column required that it should be supported at the same time, both to relieve the existing curvature and to remedy the deformity of the chest, which, to a great extent, caused the difficulty of respiration and threatened still more serious disease of the lungs. An apparatus, similar to that already described, was applied to support the spine and to relieve the chest from the increasing pressure upon the lungs; from this apparatus two steel springs were extended upwards so as to afford support to a collar which encircled the neck, clasping in front, and upon which the head rested, supported mainly by its resting upon the lower jaw and the occiput, or back of the head. This collar afforded efficient support to the head, whilst it interfered but little with its rotary motion or the use of the lower jaw. The extreme nervous irritability of the child was a prominent difficulty to be overcome, but this soon yielded, and firm and comfortable support to the diseased vertebræ was afforded by this method, and the previous symptoms at once began to improve. The pains in the chest were entirely relieved, and she began to improve in her general health; the nervous irritability subsided, and she became as cheerful and pleasant as before the disease commenced.

She had been able to walk but very little before applying the support, but afterwards she soon began to walk with ease, and engaged in the usual sports of childhood with as much zeal and vigor as is usually displayed by children of her age. During the first six months she gained two inches in height, and since then she has grown rapidly and her general health has been perfect. She is free from pain, and the chest is assuming a more rounded and natural appearance. In these cases, where the curvature involves the cervical vertebræ, the symptoms are more severe and the treatment more difficult; although the reduction of the existing curvature is not as marked, still the results of treatment have been as favorable as in other cases where the location of the disease has been lower down.

No. 7 Harrison Avenue. CHAS. H. SPRING, M.D.

A NEW medical school is about to be established in San Francisco, in connection with a private hospital now under the charge of Dr. Toland.—The old school, connected with the University of the Pacific, is flourishing, and new lecture rooms and other accommodations are now being fitted up for its use.

PROF. FERGUSSON'S LECTURES ON THE PROGRESS OF ANATOMY AND SURGERY DURING THE PRESENT CENTURY.

Lecture III.—On Hare-lip and Split Palate.

Mr. President and Gentlemen,—My first formal operation in surgery was for hare-lip in the year 1828. The patient was a youth, seven years old, and, as expected, the result was satisfactory. The gap in the lip was complicated with one in the palate. For thirty-six years at least, then, my attention has been given more or less zealously to these subjects, and from what I have observed during that considerable period, I fancy that my experience has been on both as much as that of most men in this country. During that time I have seen many hundreds of both kinds of cases, and being about to frame a lecture for the present occasion, the question naturally arises—Have I anything new to say? I have, in a manner, exhausted the subjects, as far as my knowledge goes, in my clinical teaching; but as a number of years have elapsed since I published either cases or observations, I believe that I cannot do better than refer to them both, and whilst recapitulating some principal points, bring forward such others as may, to you, appear in some degree novel.

To begin with hare-lip, I may state that there is no such resemblance to the lower animal in the human subject. The fissure in that animal is invariably in the mesial line; in man it never is. Of the many which I have seen, I have never met with an instance of the kind. Whether there has been one or two—a single or a double fissure—the defect has always been on one side or both, and when it has extended to the alveolar ridge, it has also appeared in one side or both, whilst the mesial line, both in bones and soft parts, has been in a manner perfect.

There is great variety as regards the mesial part of the lip. Often it is slender in all dimensions, and does not extend to the prolabium or free margin. In other instances it is of fuller dimensions in all respects. In many examples of double fissure the central portions are apparently thrust forward, and seem of extraordinary development; but these features, as also the flat alæ and expanded nostrils, I am inclined to attribute chiefly to defective bulk in the lateral portions of the alveoli. I have no doubt that an erroneous impression has sometimes arisen in this way. Here is a likeness after an operation for hare-lip, showing the cicatrix exactly in the mesial line, and with some this might appear as a direct refutation of what I have stated; but here is the face before an operation was performed, and the gap was large on both sides. It was as marked an instance of cleft under each nostril as could be, and in the operation the middle projection of bone was taken away, whilst the mesial portion of lip was used chiefly to form a columna for the nose. The result is a cicatrix exactly in the mesial line; and thus, I imagine, a most glaring example of the lateral fissures has been supposed to be a positive proof of defect in the mesial line. I repeat that I have never seen an instance of the kind, whilst I have seen some rare examples of fissure in the face elsewhere, such as in the eyelids, cheeks, and lower lip. In the cheek I have seen a congenital fissure extend from the angle of the mouth to the malar bone; and in another instance, from the angle of the mouth outwards towards the angle of the jaw. In one rare example I have seen a congenital gap in the lower lip extending from near the left angle of the mouth to the base of the lower jaw. It is the only instance of such congenital malformation that I have seen. It was amenable to operation, and the gap was accordingly closed.

In the worst cases of this malformation, where there is fissure through the alveoli as well as the lips, the central portion usually presents difficulties to the satisfactory accomplishment of an operation, and it has often been a nice question, what should be done either as to retaining or removing the part. In some rare cases there is no protrusion beyond the ordinary line, but in the majority, even if there be only a single gap, there is a projection forwards which may seriously impede the just approximation of the edges at, or soon after, an operation. Before deciding such a question, it might seem highly advisable to know what this part really is, and what may be its apparent importance. The most striking way in which I can bring the subject before you is to take the example of double fissure in the alveoli. Now whether the central part projects forward or not, there is a round knob like the tip of a finger or thumb, according to age, which is familiarly known as the intermaxillary portion, bone or bones; and while it has usually been referred to as single, it has also been spoken of as analogous to the pre-maxillary bones in animals of a lower grade. Some foreign histologists, as Von Ammon and Vrolik, have displayed great research on this subject; but I know of no more minute anatomy in the English language than that in my own work on Surgery. There it was shown that this projection consisted of two portions of bone joining in the middle under the columna nasi, as in the normal junction of the superior maxilla. The first specimens which I had of this were procured by clipping the projection off during the operation, at its narrow neck above, in the line of the vomer. I have subsequently examined more entire specimens procured from the dead body, and found that the united portions forming the projection extend upwards and backwards by a narrow neck until they join by a kind of symphysis with the lower and front end of the vomer. This junction is far behind the line where the operator would cut the neck of the projection.

When the palate is split, as it very generally is in the double fissure through the alveoli, the vomer sometimes has its only support below in the intermaxillary projection; or, rather, the projection seems to be an appendage to the vomer, for it appears to be supported in its position by that bone, and by the cartilaginous, fibrous, and mucous tissues associated with the septum. Even in the youngest fœtal human upper jaw it is difficult to detect the distinction between the intermaxillary portions—equivalent to the pre-maxillary bones in lower animals—and the lateral or true portions of this bone; but, curiously, whilst no line of the kind can be traced in the well developed fœtal skull in the front part of the alveolar ridge, the suture remains tolerably distinct in the palatine portion of this bone until a late period of adult life. Here is the line of that distinction; and when there is a malformation or defect of the alveoli in single or double hare-lip it is invariably in this line. In the central portion the two front incisors, deciduous and permanent, are, each at the proper time, usually tolerably perfect. The additional incisor on each side, deciduous and permanent, is generally of imperfect development, or altogether wanting, and, instead of projecting downwards, usually slopes outwards into the fissure. When present, it is often shed at an early period, from decay in its substance, or by actually falling out entire. The canine or eye-tooth generally makes a fair show, and is of tolerable use, although it projects inwards and is rarely to be compared with the normal tooth, or, I might say, the same tooth in the normal jaw.

This intermaxillary portion may be looked upon, practically, as one mass in the deformity now under consideration. It may vary in size—breadth and thickness—and also as regards its prominence, but it is always found in the skeleton as I have represented.

When there is only one fissure in the alveoli, the mesial portion on that side has often a tendency to project forwards, so as to endanger the success of the operation for the remedy of the malformation. In such a case I should consider it best to cut the part away. The blade of a scalpel can readily be passed into the line of junction in the middle, and the division may be effected with the knife if the subject be young. When the fissure is double, it has been proposed to bend the projection back by pressure, or after breaking its narrow neck; but I have noticed, on trying both plans, that the mass has been an impediment to a very satisfactory operation on the lip, and whilst I do not positively object to the occasional use of either of these plans, I give a decided preference to the removal of the projection altogether. If bent backwards, it will probably be at the damage of the vomer and septum; whether bent or broken, the teeth will be thrown on a new plane, and will be likely to project backwards. I have recently heard it proposed to cut out a piece of the narrow neck, so as to let the knob fall backwards into a better place; but if this were done, I should doubt if the knob would not die for want of circulation. Of course, if the part can be preserved in its natural position, that will be best; and if there be any slight projection, that will be gradually remedied by the pressure of the lip after the operation. However wide the gaps in such cases, it is remarkable how they close as years roll on, for in many instances the opposite sides approximate so closely that a fissure will almost elude observation. I have never seen a complete osseous closure. Close approximation gives strength to this condition of the upper jaw. In early years, when there is no lateral support, the intermaxillary portion and the central incisors must be of little value as regards prehension, incision, or mastication; for the narrow neck and vomer will give but little stability in such acts. Indeed, in making such preparations as these in the infant head, it is difficult when the parts are moist to keep the projection *in situ.*

As to the causes of this defect, whether in the lip or jaw, I have no explanation to offer. I look upon most of the theories on this subject as proofs of how easily even educated men give a loose rein to the imagination. If this be the case amongst ourselves, it is not to be wondered at that amongst the non-initiated, particularly females and mothers, the influence of the imagination is supposed to be sometimes baneful. When we hear of mothers producing boys or girls at will—a "son and heir," for example, or a daughter when the boys become more numerous than the "governor" may think right—then I shall believe in the influence of the imagination. If I may, or dare, venture a theory of my own, I am of opinion that the defect arises from the breed, and that it occurs where there is a predisposition in the parents. I fancy that I can detect this in the features of father or mother, or of both.

Regarding the operation itself, my personal experience extends to between 300 and 400 cases. Prior to 1850 I had kept notes of only a few of such cases. At that date I was asked to operate on one which had baffled the best efforts of Mr. Liston and Mr. Lonsdale, and at the same time to use a spring or truss, to push the sides of the lips forwards—an invention of Mr. Hainsby, the father of the child. The operation proved successful, and I had good reason to be satisfied that the instrument had been efficacious. Since that time I have used a similar appliance in upwards of 250 instances, and consider it far superior to any other means—by straps or otherwise—for drawing the parts together. Particular notes were taken of these cases, some of which are interesting. One hundred and forty-six were males; 153 were on the left side; 53 were double fissure; and no less than 208 were associated with cleft palate. One hundred and sixty-nine of these have been operated on at King's College Hospital.

As to the results, three of these patients have died, seemingly from the proceeding; not from bleeding or shock, but from some child's ailment supervening, such as thrush or diarrhœa. I have never seen a single instance of convulsions afterwards, at any period of life, and I have operated at all ages between a few days old up to thirty-six years. Taking all things into consideration, I am of opinion that the earlier the operation is performed the better; assuredly before teething. I decidedly prefer about the end of the first month. In a simple case and healthy infant, it may be done any time earlier to within a few hours of birth. If the child is weakly and the gap large, particularly if complicated with split palate, I strongly advise delay for some months until additional strength is acquired, and also that the parts may be pushed closer in apposition by the use of the truss referred to. I have sometimes made babies wear this for many weeks or months before, and have always noticed its great value.

In double fissure I have generally operated on both sides at the same time. Occasionally, however, I have taken first one, and then the other; selecting the simplest first, and performing the second operation a few weeks—possibly months—after. In some of these double clefts the middle portion of the lip has been so scrimp that I have used it for the columna, particularly in instances where the nose has been flat. When it has seemed needful or best to take away the mesial projection, the closure of the gap has always been a very easy matter, but when this part has been prominent, there has often been cause for much anxiety as to the result. The tension of the lip over this part has threatened to be too much for the recent adhesions. In only one instance has there been a total failure of union, and in that I afterwards repeated the operation with success. In several cases there has been serious threatening of non-union by the gap opening an hour or two, or a day or two, after the stitches have been removed. In such instances I have scraped the surface, introduced needles again, and put all up as at first, and thus made the process appear only as one. This method I have rarely seen fail. On one occasion a child was running about eight days after a very successful operation for a single fissure. It unfortunately fell on its face, and at once split the union open. Although eight miles off, it was brought to me within a couple of hours, when I introduced fresh needles, and with the ordinary care the result was as perfect as could be desired.

After trying a variety of lines of incisions, and seemingly cunning devices for adaptation of opposite surfaces, so as to give the best possible appearance to the lip, I confess that, with few exceptions, the old-fashioned straight line, from the root of the cleft to the free margin of the lip, appears to me to be the best. If a notch or irregularity is left in the lip, it arises generally, I believe, from too little having been cut away from the margins of the fissure.

To make sure of a good and easy approximation of surfaces, I strongly recommend a free separation of each side of the fissure from the alveoli. Some have said that the frænum on the mesial side in a single fissure should not on any account be cut. It is often unusually large in such cases, and I say, from my experience, that I see no reason why it should not be cut as readily and freely as any other part of the mucous junction of the lip to the jaw.

To take a refined view of a perfect operation, I have myself found the most difficult part to be that of bringing the opposite sides so accurately together that the margin between the mucous membrane and skin should meet on a proper level.

The position of the patient and surgeon during the operation deserves some notice. I have often seen the operator sit or stand in front of his patient, and, in general, before the work has been finished, his face and dress have been spluttered over with blood, saliva and mucus. A far better plan is to be behind, or at the side, so that all the annoyance referred to may be avoided. In infancy the head should rest between the surgeon's knees, who should sit; and in the adult the operator may stand behind a chair on which his patient sits, or at the head or side of a table on which his patient is laid. In either of these positions he may escape the unseemly damage to personal appearance to which I refer.

A few of my infantile patients have taken the breast after the operation, but most have been fed by hand, and some modern devices with caoutchouc and bottles have been of great service.

Many of these observations are of no novel character, but possibly the experience which I have had may render them of additional value. It may, perhaps, be thought, that in bringing this minor subject in surgery before you in these lectures, I deal but lightly with my position. You may have noticed that I look upon some of the so-called minor subjects in surgery as being far more important than some imagine; and in extenuation of my present course, I may refer to the circumstance that the illustrious Roux, in writing the experience of forty years of surgical practice, did not disdain this topic, but made it the subject of one of his famous letters to "Cher Lawrence," his equally distinguished and experienced contemporary.

Experience in hare-lip naturally implies some experience in cleft palate, and I hope that I am not taking an additional liberty in placing this subject in association with that already referred to. In further apology I may state that both the surgery and anatomy of cleft palate are entirely of modern date, and within the time to which I have limited the scope of these lectures.

The early history of the operation for cleft palate sounds like a romance. In 1819 a medical student applied to Roux, then one of the surgical luminaries of Paris, with a defect of this kind. Roux pared the edges of the cleft, and brought them together with stitches. Union followed; the palate became like a normal one, and when the youth appeared amongst his former friends, the change in his voice was such that he could scarcely be recognized as the same person.

I doubt if this case, although fairly made public by Dr. Stephenson in his inaugural dissertation on Velo-synthesis, when taking his degree of M.D. in the University of Edinburgh in 1820, produced the full effect on the surgical mind that it should, even when further elucidated in the famous essay by Roux, published in 1825. Possibly the rarity of the condition and the difficulties of the operation led to apathy, and down to the period of Roux's death no one seems to have had any experience on the subject at all equivalent to his. Like others taking their early surgical lessons in the third decade of the present century, I was attracted by the romance referred to. But I had seen little to absorb special attention. Whilst busy in dissecting-room work, a subject with cleft palate came under notice. At that time, as even now I suppose, few students took the pains to dissect the palate; but it was my fortune to have this one to luxuriate upon. I made a careful dissection of all the muscular apparatus, and came to the conclusion that I had rarely seen it so highly developed, although the palate and throat were small, being those of an aged female. The whole matter fell aside for years. I had performed the operation on the living body, and had heard of others doing so, without success. The subject in a manner slept on this side of the Atlantic, with the exception of the doings of Roux himself; but about 1840 all Europe, in a surgical sense, rang with the brilliancy of Stromeyer's operations for club-foot and Dieffenbach's for strabismus. Tenotomy and myotomy became the fashionable surgical mania, and I bethought me of my former dissection of the cleft palate. For anything that I knew, it was original. I compared it with the normal condition anatomically and physiologically, and then reflected on what I had seen and heard of surgery as applied to this condition by Roux and others. My zeal was further stimulated by a paper by Dr. J. Mason Warren, of Boston, which told of a larger proportionate success by Dr. Mütter, of Philadelphia, and himself, than to my knowledge had yet been attained by any others, not even excepting Roux. On additional reflection, I fancied that I had fallen upon new views in anatomy, physiology, and surgery, and my conclusions were embodied in a paper which was submitted to the Medical and Chirurgical Society of London in December, 1844. That paper was honored with a place in the volume of "Transactions" of the Society for 1845. Its main features went to show how the cleft palate was closed in deglutition by the action of the superior constrictor of the pharynx; how the palato-pharyngei in cleft palate acted differently in this state than in the normal palate, and, instead of closing the opening between the pharynx and the nares, in reality tended to draw the parts asunder—an act which was overbalanced by the vigor of the upper constrictors of the pharynx. Above all, looking to the surgical aspect of the malformation, I gave it as my opinion that the action of the levatores palati probably exercised such an influence on the lateral portions of the palate, after the operation of Roux, as to mar its good intentions. I showed, in as far as one could by reference to the dead and living parts, how the levator muscle on each side had such free and uncontrolled action that, whenever excited, it drew the margin of the cleft outwards and upwards, and so tugged upon the stitches put in by the surgeon that ulceration in their sites and separation of the junction was a most probable result—that, indeed, which had caused the failure of Roux's operation in so many instances.

The inferences which I drew were, that if the palato-glossus, palato-pharyngeus, and levator palati on each side were divided, the soft flaps would thereafter, for a time, be so relaxed that in all probability the mesial line of adaptation would be so little disturbed that union would take place. The tensor palati I considered would have little disturbing influence, nor did I put much importance on that of the palato-glossus. My impression was, that the action of the levator palati and palato-pharyngeus, particularly that part in the posterior pillar of the fauces, was likely to prove detrimental; and, in accordance with the somewhat normal and already popular practice of myotomy and tenotomy in other directions, I recommended division of these muscles as an adjunct to the ordinary operation for cleft palate.

By modern custom, the department of anatomy associated with the professorship of surgery in this College has been held of comparatively little account, although both my predecessors have displayed remarkable acquirements in this direction, which they have turned to great account in the field of surgery. As professor of human anatomy, I hope that I may not be out of order in claiming to be the first who solved the problem of how the cleft in the soft palate is closed during deglutition. The drawing influence of muscle has been most recognized; the pushing has been less taken into account, although it is very considerable. Swallowing, the vermicular action of the intestines, and defecation, are notable examples of this force, just as palpable in the estimation of the anatomist as the drawing of the biceps in flexing the arm. Anatomy without physiology would be in a manner senseless, but when joined together they give life and soul to surgery. The influence of the constrictor muscles of the pharynx in the process of deglutition was well known to physiologists; but how, during that process, the gap of the cleft palate was closed in vacant space was an enigma, until I had the good fortune to show that the parts are pushed together by the action of the superior constrictor particularly, so that the gap between the pharynx and the nostril is as completely closed during deglutition as if the velum were entire. Then, for the surgical aspect of the investigation, I showed that by temporarily taking off the influence of such muscles as in common action tended to draw the two portions of the soft palate aside, there was a probability of such entire rest that union in the central line was most likely to take place—certainly, at any rate, more likely than with these muscles in full vigor, irritated, too, as they might be by the wounds, by inflammation, and by the presence of stitches. The almost intolerable distress, the depressing influence, the actual danger, associated with the injunction against swallowing laid down by Roux and others, made the early operations of this kind examples of human endurance which few could follow out to the full extent. Such injunctions had been occasionally disregarded, and Sir Philip Crampton gave some notable examples of this kind. Since I showed, anatomically and physiologically, that during deglutition the parts are actually pushed together, that process is no longer forbidden; and now a fair share of suitable nourishment is freely administered—a matter of great consequence as regards successful issue.

With a single exception, which shall be nameless on such an occasion as this, I am not aware that any anatomist or surgeon of repute has controverted my views as expressed in the paper referred to. Nor need I do more than advert to the amiable and flattering device of a continental admirer bringing them all out anew, a few years after, as if they were his own. I have heard of nothing yet to impugn the anatomical explanation which I first gave of how various hap-hazard incisions might or might not facilitate the approximation and adhesion of the margins of the cleft in the soft palate. The knife for dividing the levator palati was my own device, and it was proposed at the same time, and soon subsequently applied, for the purpose of separating the soft palate from the hard in cases where there seemed a probability of closing a cleft in the hard palate, as well as the soft.

Those who have devoted attention to cleft palate during the last twenty years must have been surprised at a recent dispute as to priority in separating the soft from the hard palate with a view to close the cleft in the hard. Dr. J. Mason Warren described this process in 1843;* and it was referred to in my original paper. I myself performed it in January, 1845, and have since repeated it on all fitting occasions. The late Mr. Avery devoted special attention to this portion of the palate; and after his death the subject was further ably developed by Mr. Pollock in a paper published in the Medico-Chirurgical "Transactions" for 1856. The first idea that I had of this portion of the operation for cleft palate was obtained from Dr. J. Mason Warren. I deem it but fair to the reputation of that distinguished surgeon to state that I know of no originality before his, and that I look upon all modern claims to such originality as arising either from ignorance or a desire to rob the fair reputation of a name which, in son as in father, will stand for generations among the brightest in surgery.

Although working at the subject of cleft palate since the date of my first paper, I cannot pretend to add much that is novel to the views which were then expressed. I have little to add, little to detract, from the anatomy and physiology which I ventured to submit as original. I am still as much convinced that the tensor palati has little or no influence on the soft palate—certainly that it has none to counteract the closing of the cleft. The palato-glossus I am of opinion has no practical influence; and, excepting in rare instances, I am convinced from experience there is no necessity to interfere with the palato-pharyngeus in the posterior pillar. I am equally convinced of the value of dividing the levator palati, for that is the muscle which, by drawing upwards and outwards, separates the edges so as to prevent union or break it up when the stitches are removed.

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* New England Quarterly Journal of Medicine and Surgery. April, 1843.

There is ample experience to show that union has taken place, despite muscular action to the contrary. The experience of Roux and others has proved that. But I know of no experience equal to my own to prove what I contend for—namely, that by taking off muscular action for a time, union can be rendered more certain than by leaving the muscles untouched.

Since I entertained the views referred to, I have operated on 134 cases, and of these 129 have been successful. In two union failed entirely, and in three it was so partial and imperfect that I place them as unsuccessful. Forty-five of them have been performed in hospital practice. In a considerable number an aperture has been left in the hard palate, and much benefit has been derived in many such cases from the use of an obturator. Occasionally there is a round aperture left, with such scanty material that it cannot be closed by operation; but in slits of moderate width, if the roof be wedge-shaped (not horizontal), the soft parts may be separated from the hard, and brought down so as to approximate in the middle, and be held together by stitches until they unite.

I have never attempted the operation in infancy, and consider the circumstances most favorable at or above puberty; but I have frequently operated successfully at ages between ten and fifteen, where patients have been steady and courageous. I have never operated under chloroform, and whilst I do not deny the possibility of doing so, I am of opinion that, as a rule, it is absolutely requisite to have the patient conscious, so that he may facilitate the steps in a variety of ways.

This enumeration includes all kinds of cases, and refers chiefly to the cleft in the soft palate. In many instances of cleft in the hard palate it is utterly impossible to contend against nature; and even in the soft, the parts are occasionally so scanty that there is literally no material to work upon.

In as far as I know, the greatest success recorded before my own views were made public was that achieved by Mütter, of Philadelphia. In 1843 he had operated successfully in nineteen out of twenty-one cases; and J. Mason Warren, of Boston, had been successful in thirteen out of fourteen cases. These instances were of both hard and soft palate. What may have been their after-success I cannot say. It has been related of Roux, since his death, that he had operated on 120 cases, and that of these, one in every three had failed. I attribute Roux's comparative want of success to the circumstance that the levator palati and back part of the palato-pharyngeus were left untouched; and I consider that Warren's success may have resulted from the free incisions which he made through the palate outside the pillars of the fauces. My own success, if I may so call it, I attribute chiefly to the division of the levator palati, and next to the relaxation which the wound for that division involves. For mere relaxation, the incision of Dieffenbach is probably the most perfect. I know that it has been particularly successful in Mr. Skey's hands, and in Mr. Pollock's; but, with all deference, I am still disposed, from all I know of the subject, to prefer a free incision above the soft palate, whereby the levator palati may be divided to a certainty. In addition, I look upon this wound as of great service in this respect—the lymph effused upon it acts as a splint, whereby the palate is kept fixed as a board until union in the mesial line is complete.

As to attitudes in this operation, the patient may sit or lie, as may best suit convenience. Latterly, I have made most use of the recumbent. I find that the head can be kept best on the same line in this position; and as regards my own views on the anatomy and physiology of the parts concerned, I deem the subject of some importance. For instance, if the patient sits with the head slightly thrown backwards, the palato-pharyngei when irritated, pull the soft palate downwards towards the epiglottis, so as to leave a space between the palate and the base of the cranium; but if the head be thrown far backwards the axis of action is altered, and these muscles draw the soft parts upwards, or, in other words, bring the soft palate towards the base of the cranium, and thus add to the difficulties of the surgeon by limiting the space above the soft palate where he has to work with the needles in introducing sutures. Here, as in hare-lip, the surgeon has generally stood before his patient, but I invariably select his right side in preference to all other places.

The grand practical object of this operation is to improve the voice and articulation. Defective deglutition from this malformation is what attracts the mother's or nurse's attention in early life. The cries of infancy are in no wise peculiar in tone; but when definite articulation commences, or rather should commence, the value of an entire palate is then appreciated. The air and sound, in passing outwards from the larynx, escape in part through the nostrils by the split in the palate. A nasal twang is the result, and articulation as in the normal state of the parts is impossible.

Immediately after the operation, the modification on the voice can be at once detected. It is customary to keep those operated on from speaking for eight or ten days. It is, however, a needless restriction as regards my operation. In reality, few care, under the circumstances, to speak at all; yet I do not think that it would do harm. In the course of eight or ten days, when the fever or distress following the operation has gone, the tone of the voice is at once perceived to be changed for the better. Improved articulation, however, comes more slowly. Years, many years, are required for distinct articulation when the whole organs are to all appearance in perfection; and after the most successful operation for cleft palate, months and years are required to alter defective sounds. Voice and speech have to be modified anew. With some the changes come slowly and sluggishly; but with others they are so rapid and perfect that in a few years the original defect cannot be detected except by a practised ear. —*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, AUGUST 18, 1864.

Infanticide.—The frequent notice of cases of child-desertion in the morning papers seems to lead to the conclusion that this crime is becoming one of common-place occurrence among us. Taken in connection with the more rare instances of unmistakable violence to newborn infants and the undoubted prevalence of the practice of abortion among all classes of society, it claims our attention as a matter of serious consideration in its relations to great social questions. In point of morality we see no difference in these three varieties of crime, but undoubtedly many a tender-hearted wife exclaims against the wickedness of the poor girl who thus leaves her offspring to the chance mercies of the passer-by to screen herself from a life-long infamy, and yet does not hesitate to destroy the fruit of her own womb before it has seen the light, if nature insists upon her becoming a mother more frequently than she desires. In the one case the whole community is shocked by the heartlessness and depth of depravity thus exhibited, and the law of the land punishes with a just severity those who thus offend the laws of humanity. It is only a few weeks since that two cases of such criminal desertion were brought before the notice of our courts, and the prosecuting officer for the government urged the extent of the punishment authorized by law against the agents in such iniquity, stating that he considered the case really one of murder. The public journals made them the text of much excellent preaching, wisely pointing to the evils which are inseparable from a population in which the female sex is constantly increasing in startling preponderance, as well as to the remedy, which is to be found in the establishment of societies for the encouragement of emigration of women to our western lands, where the proportion of sexes is in an inverse ratio. There are, to be sure, other ways of looking at such questions, and there are States which, caring more for the production of soldiers and laborers than for marriage licenses, prevent the occurrence of such crimes by establishing in convenient localities well-watched turning-tables, where such waifs are received and turned to the public advantage, and no questions asked. We trust, however, that it will be long before such silent corruptors of the public morals will find a place in our land, or that popular opinion will abate its indignation towards this criminal exposure of children.

But, on the other hand, there is another sin of far graver importance and of wider spread, a sin both against nature and the State, and one not recognized by courts of justice or the public press. No one but a physician can be aware of the universal laxity of opinion which prevails in our society in relation to this subject of criminal abortion. It is really astounding to listen to the sentiments expressed by gentle women in relation to their responsibility towards their unborn children. It would seem as if every feeling of humanity were extinguished by the fear of a too rapid increase of family, and fathers look with a blind or favoring eye upon any measure which may prevent what they consider to be a calamity. It is with feelings of real surprise that they are told of the sinfulness of an act which they seem to regard as of no moral importance whatever. Society needs a thorough awakening upon this subject, and it should be brought home to every woman and man in its true light. It should be taught in every school book of physiology, and every public print should reiterate it, that the child is alive from the moment of conception, and that every interference with its being is as much a sin at one period of its existence as at another. No consideration of false delicacy should be allowed to stand between such information and the public, for the increase of our native population and the health of women are both at stake, and solely in consequence of this sinful ignorance. It is a greater evil by far than the former we have been considering, and should be treated in the same public manner.

UNUSUAL FORM OF ALBINISM.—*(Klin. Monatsbl. f. Augenh.*, i. 516).—A lady of 45 consulted Dr. Liebreich for an affection of the eye ; he was struck with the intensely red glow of the pupils when she entered the room. When the eye was illuminated by the ophthalmoscope, at the first glance the pupils only appeared to be red ; further examination, however, proved that the iris also was transparent, as in an ordinary albino ; though, owing to its being seen by both reflected and transmitted light, the red from the fundus admingled with the brown hue of the anterior surface. The degree of transparency of the iris may be best recognized by using only transmitted light ; thus, by throwing the rays converging from a convex lens on the outer part of the sclerotic, while the eye is turned a little inwards. Thus in the present case, just as in ordinary albinos, not only the pupil but the whole of the cornea appeared of a brilliant red ; by throwing the apex of the luminous cone alternately on to the anterior surface of the iris and on to the sclera, and thus examining only by reflected or only by transmitted light, it became clear that the posterior pigment-layer, the epithelium of the iris contained no pigment, whilst the stroma contained an approximately normal amount. In the latter respect the present case differs from the ordinary albino, where the stroma of the iris is also free from pigment, and hence appears white by reflected light. The epithelium of the choroid contained no pigment, and the stroma very little, so that the choroidal vessels could be seen with great clearness ; had there not been slight nystagmus, it would certainly have been possible to see the choriocapillaris.—*Ophthalmic Review.*

Prof. Laugier, one of the surgeons of the Hôtel Dieu, has recently made a most important communication to the Academy of Sciences. In an operation performed on the arm, and in which the median nerve had been severed, that skilful surgeon united by a suture the two ends of the nerve. Almost immediately after signs of sensibility were observed, and in a few days more the nerve had entirely recovered all its properties of sensation and motion. I need not insist on the importance of this case, which throws such a new light on physiological pathology of the nervous system. Within a few weeks, in a discussion which took place at the Society of Surgery, it was affirmed by several members that the regeneration of the nervous tubes, which alone could cause the recovery of sensibility and motility, was the work of weeks and months, and could not immediately take place. Such, also, was the opinion of M. Brown-Séquard and of MM. Vulpian and Philippeaux. These two gentlemen published last year a memoir which received academical honors, and in which they gave the relation of different experiments they had made, the result of which is entirely opposed to that obtained by M. Laugier.—*Paris Cor. of Lond. Lancet.*

There were 138 deaths in Providence during the month of July ; 49 *more* than in July, 1863, and 52 *more* than the average for July, during the nine years, 1855 to 1863 inclusive. A large portion of this increase of mortality is due to the large increase in the population of the city, which is now at least 56,000. An examination of the causes of deaths shows a very slight increase in diarrhœa and dysentery as compared with 1863, and no increase in cholera infantum. It also shows a large increase in consumption, pneumonia, scarlatina, and hydrocephalus, diseases which are not peculiar to the season.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, August 13th, 1864.

DEATHS.

	Males.	*Females.*	*Total*
Deaths during the week - - - - - - - -	57	58	115
Ave. mortality of corresponding weeks for ten years, 1853—1863,	56.3	51.6	107.9
Average corrected to increased population - - - -	00	00	118.7
Death of persons above 90 - - - - - - - -	0	1	1

Communications Received.—Cases read before the Middlesex East District Medical Society.—Case of Bronzed Skin, with Disease of the Supra-renal Capsules.—Case of Incised Wound of the Neck.

Married,—At Concord, N. H., Major Robert B. Carswell, Surgeon of the Board of Enrolment in the 2d New Hampshire District, to Miss Anna J. Marshall, of Dunbarton, N. H.

Died,—In Edgartown, Martha's Vineyard, Aug. 3d, Dr. Stephen Huse, of Methuen, aged 65. Dr. H. was born in Edgartown, but practised in Methuen over thirty-five years.

Deaths in Boston for the week ending Saturday noon, Aug. 13th, 115. Males, 57—Females, 58.—Abscess, 2—accident, 2—inflammation of the bowels, 2—congestion of the brain, 3—disease of the brain, 5—bronchitis, 1—cholera infantum, 31—cholera morbus, 1—consumption, 6—convulsions, 4—croup, 3—debility, 1—diarrhœa, 5—diphtheria, 1—dropsy, 1—dropsy of the brain, 4—drowned, 1—dysentery, 10—scarlet fever, 2—typhoid fever, 1—hæmorrhage (internal), 1—infantile disease, 3—disease of the kidneys, 1—congestion of the lungs, 2—inflammation of the lungs, 3—marasmus, 1—measles, 1—old age, 1—paralysis, 2—peritonitis, 1—premature birth, 3—smallpox, 2—syphilis, 1—unknown, 7.

Under 5 years of age, 68—between 5 and 20 years, 10—between 20 and 40 years, 16—between 40 and 60 years, 10—above 60 years, 11. Born in the United States, 90—Ireland, 17—other places, 8.

THE

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BRONZED SKIN, WITH DISEASE OF SUPRA-RENAL CAPSULES.

By Thomas H. Gage, M.D., Worcester.

[Communicated for the Boston Medical and Surgical Journal.]

Early in February, 1862, I was called in consultation with Dr. B. F. Heywood, of this city, to see Mrs. Currier, of Saundersville—a tall, fleshy, fine-looking lady, aged 51, of light complexion, blue eyes, and dark brown hair. Her disease was scirrhus of the right breast, of several years' growth, of large size, of irregular but unbroken surface, uncomplicated with disease of the lymphatic glands, unattached, and but little painful. I removed it by amputation on the 13th, and she remained under the care of Dr. Heywood, making a rapid and excellent recovery. Soon after, she removed to New Hampshire, and remained there for nearly two years.

For eighteen months her health continued good; but at the expiration of that time (about last September) it began to fail, the first symptoms of disease being occasional paroxysms of pain and distress in the epigastric and right hypochondriac regions, shooting around to the back, and attended with tenderness and soreness, and occasional vomiting. These symptoms increased in severity during the winter, the paroxysms of pain becoming more frequent, more severe, and of longer continuance, and the soreness quite persistent, so as to cause a constant yielding of the body, which in walking was bent forward and to the right side.

In March last (1864) she returned to Massachusetts, and came again under my care. The following is an abstract of my record.

April 4th.—Patient is decidedly anæmic, but not much emaciated; flesh soft and flabby; is very feeble; has a weak, rapid and sometimes almost imperceptible pulse; becomes faint and breathless upon the slightest exertion, and walks in stooping posture on account of pain and soreness in epigastrium. Her position on lying down is upon the right side, with limbs drawn up and head and shoulders depressed. Lying upon the back or left side causes a sensation of "pulling and tearing" in the right hypochondrium, which is very distressing. Upon examination, I find the cicatrix in the breast and the whole region of previous disease healthy. I cannot find any change in the feeling, appearance or position of organs in the part principally complained of. There is, however, a very perceptible change in her complexion, which consists in a *bronzed discoloration* of the skin, most marked upon the backs of the hands and fingers, in the flexures of all the joints, both great and small, and upon the face. She herself has noticed this, and been very much annoyed by it, for several weeks. She is depressed in spirits, but has usually a good appetite; her bowels are regular, urine nearly normal, and sleep quite natural.

May 20th.—Since last record has had almost daily paroxysms of very acute gastric distress, attended with sensations of obstructed accumulation of gas in the stomach, sometimes lasting for hours, and generally relieved by eructations of flatus, or by vomiting. The bronzing of the skin is much increased, both in extent of surface and in intensity. Local and general symptoms unchanged.

June 17th.—Has failed much in general health and strength, and for a fortnight has been confined constantly to bed, decubitus being still upon the right side, with limbs drawn up, and body bent strongly forward. She thinks food increases the gastric uneasiness and pain, and of late is much inclined to refuse it. I can see no evidence that this opinion is correct. The "bronzing" still deepens in intensity. Her hands look like a mulatto's.

June 30th.—On the day following last record, after an unusually severe paroxysm of distress, violent vomiting came on, relieving entirely the pain, but causing great exhaustion and entire inability to take or retain food. This disability, though the vomiting has been mainly controlled, has continued up to the present date, and this evening, at 6 o'clock, the patient died, of exhaustion and inanition. Her mind was clear to the last. The bronzing of the skin had steadily increased and deepened up to the last moment; and "*bronzing*" describes precisely the discoloration. It was like that of a bronze statue, without lustre.

An autopsy was made, twenty-four hours *post mortem*. Emaciation was by no means great, though the flesh was soft and flabby. The discoloration was somewhat faded, yet very well marked. The section of adipose tissue overlying the sternum and abdominal muscles was over an inch in thickness, and there were very large accumulations of fat in the omentum, in the mesentery, and around the kidneys.

Upon turning back the abdominal walls and removing the stomach and intestines, two large, almost spherical tumors were observed occupying the place of the supra-renal capsules, and joined together across the vertebral column by a thickened, corrugated mass of enlarged and diseased lymphatic glands. The tumor upon the right side was somewhat larger than that upon the left, being about two and a half inches in diameter, and adherent by a strong and broad attachment to the under surface of the liver. From this point of attachment several broad lines of reddish-white, soft deposit radiated into the substance of the liver for a distance of an inch and a half, resembling soft cancer as sometimes seen infiltrated in that organ. *Externally*, the tumors presented a smooth, uniform, glistening surface; *internally*, upon section, a dense, firm, fibrous texture, making a smooth surface, at first white, but speedily becoming covered with a bright, orange-yellow exudation, which after exposure to the air became a dingy, greenish brown. The diseased lymphatic glands presented a very similar texture, but gave upon section none of the bright yellow fluid.

There was no other disease of importance noticed in the thorax or abdomen. The head was not examined.

CASES READ BEFORE THE MIDDLESEX EAST DISTRICT MEDICAL SOCIETY, MAY 18, 1864.

By R. L. Hodgdon, M.D., of West Cambridge, Mass.

[Communicated for the Boston Medical and Surgical Journal.]

Case I.—*Passage through the Alimentary Canal of an Adult of a portion of clay Pipe-stem, six inches in length.*—T. I., on March 6th swallowed a piece of clay pipe-stem. He sent to ask advice. Supposing that he had broken off a piece of stem while smoking, I ordered an ounce of castor oil. On the 13th, he came himself for advice. He reported that the castor oil had acted freely, but without relief to his distress in the region of the cardiac orifice of the stomach. I then learned that, in doing the trick of *swallowing the sword*, he had used a long clay pipe-stem, and supposed that he had swallowed about 4½ inches in length of it. I saw that this was not a case for castor oil, and advised rest from work, a bland diet, and to trust entirely to nature.

On the 15th, at 7, P.M., I was called to him. He had severe pain in the region of the pyloric orifice of the stomach. Gave him one fourth of a grain of sulphate of morphia, and directed it to be repeated till relief was obtained. At 10, P.M., was called again. Pain very severe. Hands and feet cold. Pulse 50. Injected one fourth of a grain of sulphate of morphia under the skin. In about ten minutes relief was obtained. He passed a quiet night, and had no more pain. On the evening of the 19th, thirteen days after the accident, he found in his dejections a piece of pipe-stem six inches in length. The longest piece on record (so far as I know) which has passed, was three and one half inches.

Case II.—*A complicated Case of Childbed Fever.*—Mrs. B. was delivered of a healthy child, after a natural labor, on March 31st. The first three days after labor were passed comfortably. On April 4th there was a chill, with pain and tenderness over the uterus, followed by rapid pulse and general febrile condition. These symptoms disappeared after two days, when there was a rigor resulting in an attack of pneumonia of the right lung. On the sixth day of the pneumonia there was a chill, followed by the physical signs of bronchitis in the left lung and great increase of fever. The next day the left lung was clear, and the fever had abated. On the eleventh day of the pneumonia there was a severe rigor, and pain and tenderness over the veins of the right leg. The whole limb was swollen largely, following the ordinary course of crural phlebitis, or milk leg.

April 17th.—The swelling began to diminish, the pulse fell to 84 in a minute, and the condition of the patient seemed altogether promising, except a straw-colored appearance of the whole skin. On the next day there was a chill, with pain and tenderness in the calf of the left leg, promising phlebitis in that leg. But this, like the attack of the left lung, aborted, and had entirely disappeared in two days. From this time for three weeks there was a rigor nearly every day, and sometimes twice in twenty-four hours. There was frequent pain and some tenderness in the right hypochondriac and lumbar regions, which were found dull on percussion, and hard to the touch. The diagnosis at this time was, enlargement of the liver and probable disease of the ovary. Although the lower edge of the liver could not be distinctly made out, the lower portion of the tumor was in the region of the ovary, and it was thought too low down for the liver. The peculiar complexion continued; the conjunctivæ, which up to a late time remained clear, became yellow. There was troublesome cough, and at times the respiration was very difficult. The urine was always copious, normal in appearance, and free from albumen. The bowels acted naturally, or with the aid of mild laxatives, till May 8th, when there was diarrhœa with mucous discharges, which continued up to the time of her death, on May 14th. The pulse for the last three weeks varied from 100 to 146 in a minute. The treatment was generally a supporting one—tonics, stimulants, and a good diet of animal broths, and wine whey. The abdomen was painted with tincture of iodine.

Autopsy, May 15th. Present, Drs. Holmes and Field. Heart somewhat enlarged, rather by dilatation than otherwise. The lower lobe of the right lung was found hepatized, and bound by recent adhesions to the pleura costalis. The left lung, spleen, kidneys, uterus and appendages were healthy. The liver was very much enlarged, the right lobe extending from the lower edge of the sixth rib to the crest of the ilium. The left lobe was little, if any enlarged. The liver was not fatty, and presented no evidence of disease. The gall-bladder was cylindrical in form, and measured 4½ inches in length and 1½ inches in diameter. This case is interesting from the succession of attacks of various diseases, and teaches the importance of caution in the diagnosis of abdominal tumors.

Case III.—*Diphtheritis or Croup?*—Mrs. P., æt. 30, was seen first on May 11th. She said she had had sore throat for two weeks. For more than a week had not spoken above a whisper. She had consulted a physician once, a week before, and had applied water bandages to the throat. When first seen, the pulse was 120. The respiration rapid and labored, and at times whistling. The tongue slightly furred, the lips and fingers purple, showing marked signs of imperfect oxygenation of the blood. On inspection of the throat, the tonsils showed no peculiar appearance. The vessels of the pharynx were injected and well defined, as on surfaces from which membrane has been removed. No membrane perceived. On auscultation of the chest, there was heard a combination of the sibilant and sonorous râles. Warm fomentations to the throat and chest, and the inhalation of steam were directed. The diet was to be beef-tea and wine whey. The steaming gave temporary relief. She passed a troubled night, having frequent paroxysms of distressed breathing, during which she would open the window and thrust her head out to get air. On the 12th the condition of the patient and the treatment were the same. The night was more troubled than the previous one, and her condition became worse up to the time of her death, at 4, P.M., of the 13th, 55 hours after I first saw her.

Autopsy, 24 hours after death. Considerable portions of the lungs were found emphysematous. The interior of the trachea was completely lined by a firm membrane, easily detached, except at the upper part. The membrane extended into both bronchi, and into all their ramifications, as far as could be traced by the naked eye. Her husband, after the autopsy, told me that his wife had brought to him a piece of membrane half as long as his finger and half an inch wide.

[Note.—The specimens of false membrane were exhibited to the Society, which discussed their character at some length. There was a division of opinion. A majority were in favor of croup. Since the meeting, some other members of the family have suffered from a similar disease.—Sec.]

WOUND OF THE NECK. APPARENT RECOVERY. SUDDEN DEATH.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—I send the following rather uncommon case for the Journal.

July 22, 1864, I was called to a rather feeble child, 7 years of age, at West Auburn. She was the daughter of Mr. George Hill, residing at Lewiston Falls, five miles distant. This child was running with a large two-bladed pocket knife in her hand, the smaller blade being open. It was dull at the point and for a quarter of an inch on the edge. This blade entered her neck, on the right side, about an inch above the clavicle, at the inner side of the sterno-cleido-mastoideus muscle, passing backwards and upwards to the depth of an inch and a quarter or more. The incision was transverse to the neck, but I could not ascertain whether the edge or back of the blade entered towards the larynx. The bleeding had ceased when I arrived. It had only amounted to an ounce, as near as I could judge. She was having faint spells, and there was no pulse at the right wrist. The external wound, which was five lines in length, gaped, and was closed by a slight stitch and adhesive plaster.

July 23d.—No pulse in right wrist. Breathes short. Complains of pain in right chest. Has had faint spells through the night. A slight pulse felt under the median basilic vein of right arm. Pulse in left wrist 98.

She was moved home to Lewiston Falls, and I did not see her again, but I saw her father a few days afterwards, who said she was very comfortable and doing well. The pulse had returned to the right wrist, and the wound healed without inflammation or swelling.

Aug. 3d.—Twelve days from accident she was at play; had a faint spell, and died in a few moments. No *post-mortem* examination was made.

That the blade entering at that place should have caused instant death would not have been strange; but the apparent recovery and sudden death I can only account for by supposing that the lymphatic, recurrent laryngeal, descendens noni, or pneumogastric nerves, one or more of them, were injured. I think the fainting and breathing point to the pneumogastric nerve and its branches in explanation of the case. J. H. Blake, M.D.

North Auburn, Me.

PROF. FERGUSSON'S LECTURES ON THE PROGRESS OF ANATOMY AND SURGERY DURING THE PRESENT CENTURY.

Lect. IV.—On Lithotomy in Children and on Lithotrity.

Mr. President and Gentlemen,—Much of the interest associated with lithotomy has reference to the operation on the adult. It appears to me that the difficulties and dangers of this operation have been estimated more from the results than from the actual process. Hence, as lithotomy is known to be comparatively safe when performed on subjects at any age prior to puberty, it has been deemed equally easy in performance; and a widespread notion prevails that in children it is so readily effected that little study, thought or care has been bestowed upon it.

My own experience has led me to imagine that surgeons have treated this subject too lightly; and, at the risk of being thought to have entered on ground already thoroughly explored, I shall venture to step freshly upon it, with the conviction that, although I may state nothing which is not already well known to experienced lithotomists, I may do much good to beginners by directing attention to certain points which have heretofore been scarcely, if at all, referred to by clinical teachers or surgical authors.

It has been computed that about a third of those on whom lithotomy has been performed have been under the age of puberty, and the average mortality in such cases is about 1 in 30. Comparing this result with that of the operation on the adult, the measure of success is large indeed; and hence, doubtless, has arisen the common impression that the mechanical process in the young is simple in all respects. I am firmly convinced, however, that a great mistake prevails on this point, and that as much care and skill are required on the part of the surgeon in operating on young subjects as on adults; I should say, even more; for in my personal experience I have often felt more doubtful during the steps of the proceeding upon children than when dealing with the full-grown man.

The history of lithotomy shows clearly that when the operation is satisfactorily accomplished in children, its success is almost certain. Yet we often hear of difficulties and great mishaps in young subjects, and, in particular, we often hear of the operation being abandoned for a time, or of the cutting having been performed when a stone has in reality not been found. If these matters had been more referred to heretofore by authors, operators and teachers, we should, I imagine, have heard more of the difficulties and fatality of lithotomy in young subjects than some people think of; at any rate, a more wholesome idea would have prevailed regarding the subject than, in my opinion, prevails at the present time.

These remarks have been suggested by what I have seen, read, and heard of in the practice of others during the time I have been in the profession, as well as by my personal experience. In my early days of study I was struck and excited by the circumstance that a surgeon of repute had cut into the bladder of a child to extract a stone where none could be felt. The case was considered an example of error in diagnosis. The patient recovered from the wound, but the symptoms of stone continued, and about three months afterwards another surgeon extracted a stone of considerable size from the bladder by the ordinary operation of lithotomy. Another case of a like kind came under my cognizance about the same time, and the impression on my mind was strong that in neither instance had the bladder been reached in the first operation.

In early life I assisted an experienced operator in this proceeding on the adult. Having, as he supposed, cut into the bladder, the stone could not be touched. Here I had an opportunity of examining the wound, and, a suggestion having been made that the bladder had not been opened, the operator, with remarkable dexterity, cut further in the right direction, opened the viscus, and, with great rapidity, extracted the stone, which he had previously detected by sounding. In this instance I had no doubt whatever that the surgeon had not originally cut deep enough, but had made a space with the forefinger of his left hand, between the pubes and neck of the bladder, which he had for a time mistaken for the bladder.

These and other similar instances which occasionally came to my knowledge, gave me a strong impression that in those cases where surgeons were stated to have cut for stone where one had not been present, they had probably not reached the bladder at all. In the course of time this impression has become much strengthened, and in giving, by this lecture, greater currency than heretofore to the frequent clinical observations which I have made on this subject, I feel assured that my experience and views will not be lost upon those who are earnest in the study of this most interesting operation.

As a beginner, I was taught, or had imbibed the idea, that lithotomy in children was simple in execution; and when I began to operate on the living body this impression was confirmed for a time. I had seen the incisions effected with admirable dexterity by means of a common scalpel, and in my first operation I used a similar instrument. The proceeding seemed simple in the extreme, and I adhered to the same method on subsequent occasions with most satisfactory impressions, until unexpectedly a difficulty arose which produced an effect on my mind that time cannot efface.

After many operations on the adult and on the young subject, I had in a manner forgotten my early knowledge of the position of the bladder in children, and not only was content to make the incisions with a simple scalpel, but had in a measure got careless about some matters of great importance. On the 17th of March, 1849, I had to operate on a boy four years of age at King's College Hospital. I used a scalpel, as I had often done before, and made the ordinary incisions for lateral lithotomy. A grooved staff with a large curve was the director into the bladder. In making the deepest part of the incision I purposely used the cutting instrument as lightly as possible, with a view to open only a part of the membranous portion of the urethra, and notch the prostate and neck of the bladder. These objects being effected, the point of the forefinger of my left hand was, as usual, placed on the staff, and pushed gently towards the bladder. The finger went on, but I was aware that it had not got between the urethra and the staff. With an insinuating movement (much to be appreciated by the lithotomist who, as I do, professedly makes a small incision in this locality), I endeavored and hoped to get its point as usual into the urethra and neck of the bladder. But here I felt conscious that I had failed. I was aware that the finger was getting deeper as regarded the depth of the perinæum, but that I was not materially nearer the bladder. I could feel a considerable space at the point of my finger, and was convinced that the upper part of the membranous portion of the urethra, as well as the sides above the wound, had given way to the pressure of the point of the finger, and that now, as the latter was getting deeper into the wound, I was only pushing the prostate gland and neck of the bladder inwards and upwards. These parts seemed to recede before the smallest imaginable force, whilst I felt that I could in a manner make any amount of space round the bare part of the staff. I had no difficulty in distinguishing between the surface of this space and that of the mucous membrane of the bladder. Moreover, I knew that I had never crossed that narrow neck which is always felt as the finger passes into the bladder when a limited incision is made. An impression came over me that I was about to fail in getting into the bladder, and I had the idea that unless I could open the urethra just in front of the prostate more freely, I should possibly never reach the stone. Any additional use of the forefinger of the left hand only endangered the further separation of the prostate and neck of the bladder from the pubes, and I was conscious that the only safety lay in cutting a little more freely on the groove of the staff. This I effected with great caution, and then I could appreciate the passage of the finger as usual through the prostate and neck of the bladder. The stone was thereafter easily touched and removed; but when all was finished I was forcibly impressed with the idea that I had nearly failed in the performance of the operation. Here is the stone itself; one of the smallest I have ever removed by lithotomy. An onlooker might not have been able to perceive the cause of this emergency, but I was myself conscious that I had not reached the bladder, even at a time when the finger seemed deep in the perinæum. Happily, the patient recovered, though slowly, in consequence of the lacerated character of the wound and the formation of an abscess in the left testicle.

Until this date I confess I had never fully appreciated this danger and difficulty in lithotomy in young subjects. I had read of the slipping of the gorget in this operation, and become acquainted with the fact that futile incisions had often been made, and with the supposed mistake of the surgeon in cutting when no stone was present; but now a new idea flashed on my mind, and from that time I have never lost sight of it. I have never performed lithotomy on children in public without referring to it. I have observed, since that time, that the subject has been alluded to by certain surgical authors, but I am not aware that it had ever been specially noticed before.

From all my experience I feel justified in stating my conviction that most of the cases heretofore related as instances where the incisions for lithotomy have been made and a stone has not been present, have been examples where the surgeon has failed to reach the bladder from the cause just narrated. Since I have been impressed with this view I have known of cases where, death having followed the incisions, the stone has been found in the bladder at a post-mortem inspection; and I have also heard of others where the stone has been successfully extracted at a second operation, after the first wound has been allowed to heal.

The mishap is much more likely to occur than most surgeons imagine, and my opinion is founded upon the following grounds:—The size of the wound is necessarily limited, so that the forefinger of the left hand in a manner fills it. The perinæum is much deeper in proportion in the child than in the adult, and, in addition, all the material is loose, lax, and loaded with fat. The circumstance that the bladder is more abdominal than pelvic in early life has been greatly overlooked. The slender tissue of the membranous portion of the urethra, the narrowness of the tube (both contributing to the facility with which the circumference may be torn through), and the small size of the prostate (rendering its discrimination difficult), all constitute peculiarities which are not conspicuous in the adult. In the latter there are room, development, bulk, mass, and a final wall of prostate and bladder, which may be all said to be deficient in the child.

From these data I have long since come to the conclusion, and have long taught in my lectures, that lithotomy in children, whilst comparatively free from danger as regards the final result, is by no means so free from difficulty or the risk of failure. The safety of result has been mistaken for simplicity of execution; but I hope that what I have now stated may be a warning to the young lithotomist. It may naturally be asked how the danger referred to may be avoided. My answer is, that more care than is usually given should be devoted to the operation, and that as the surgeon cuts into the membranous portion of the urethra and neck of the bladder he should never push the point of his forefinger onward unless he feels certain that he has it between the staff and the wound.

To show that I do not now speak without a fair share of experience, I take the liberty of stating that of one hundred and fifty-nine patients on whom I have performed lithotomy, fifty have been under the age of puberty—that is, under fifteen. Experience, instead of diminishing my anxiety on such occasions, has rather increased it; for as numbers have enlarged, I have been more and more impressed with the views above given. Of the fifty cases I have lost two—one was the third child I operated on, the other was the forty-eighth; so that of the whole number, I cut consecutively forty-four without losing a case, or forty-seven losing only one. Of the two lost, one died on the twelfth day after, from unhealthy inflammation; the other on the second day, from hæmorrhage and shock, the bleeding being probably the principal cause. Six of these were done in private practice, the rest in public—one (a fatal case) in the Royal Infirmary of Edinburgh, the others (forty-three in number) in King's College Hospital. I am not aware of such a list having been published before; and to myself, as I believe to the profession generally, it would be interesting to hear the results of the practice of those who have had greater experience than I pretend to in lithotomy in children.

The operation of lithotrity is now so familiarly known and so established in ordinary surgical practice, that it seems almost rash to venture any remarks upon it, or to affect the smallest originality. It is more than a quarter of a century since I myself ventured to write on a ground which was in a manner new to British surgeons. The instrument now in common use was then but little known, for the bent double-bladed crusher of Weiss had not then displaced the three-pronged lithontriptic apparatus of Civiale. Like most others in those days, I was not slow to recognize the superiority of the double-bladed curved instrument—devised, I think, by Mr. Hodgson, and made more perfect soon after by Weiss—whether the crushing force was applied by the screw, or by the hammer force which was then introduced and practised by Heurteloup and strongly advocated by Costello. Besides the common interest in this subject, a little modification in the crushing force—the rack and pinion, which I then proposed—engaged my attention further, and was probably one reason why in early years I had acquired an amount of experience in cases of stone in the bladder which does not fall to the lot of the generality of young surgeons in this country. Having now treated between 250 and 300 cases of the kind by lithotomy or lithotrity, I assume that my personal experience has been considerable, and I therefore venture to offer some remarks on the subject to which this lecture is in part devoted, which may possibly serve to advance and enhance one of the greatest achievements of modern surgery.

In the early history of modern lithotrity the grand object was to file, rasp, saw, or crack a stone into sand or fragments sufficiently small to pass with the ordinary stream of urine through the urethra; and even to the present day such may be said to be the doctrine of surgery. To such extent has this doctrine been carried, that caution has been given against searching the bladder in certain directions for fragments, or attempting their extraction by any other means than by coaxing them into a tube, scoop, or catheter, specially constructed with large eyes for the purpose.

Paralysis of the bladder has been deemed one of the strongest objections to lithotrity, as it has been thought useless to break a stone where there was no power to expel the fragments. My impression is that these views have been held by the majority of surgeons in this country. I confess to have imbibed and acted on them myself; and it is because I think I know better now that I venture to offer the present observations on a subject which many consider to have lost its novelty.

In a large majority of my own early cases, I was content with crushing the stone, and waiting for the gradual and spontaneous egress of the fragments. I did make use of the so-called scoops, the large-eyed catheters (double and single), injections and currents of water, single or continuous; but with results so unsatisfactory that I had no confidence in any way of getting rid of fragments except by forcible disintegration and chance. In some cases nature and chance did all that was expected; the fragments came in good time, and the case was complete. In others, however, there seemed no end to the disease, which, in reality, appeared rather increased by the comminution of the stone. In one instance, during the early days of anæsthesia, the patient bore lithotrity as if nothing had been done. Whatever roughness there might have been in the operation, he was, under the influence of ether, unconscious, and he bore his condition afterwards most manfully. His malady, notwithstanding, seemed rather to increase than diminish; and his sufferings at last from the fragments were such that he requested to be relieved by lithotomy. I myself, wearied with the repeated unsatisfactory results, willingly complied. Lithotomy was performed. I extracted ten small stones by one swoop of the forceps. The operation did not last a minute; and I do not think that I ever performed lithotomy with less injury to the structures implicated or with more temporary satisfaction to myself. Yet the patient, a fine healthy man in all other respects, died within a few days.

Although unfortunately experienced in the mysterious way in which patients die after both lithotrity and lithotomy, I was greatly struck by the rapid result in this instance. He had borne with comparative impunity more than the usual amount of irritation and suffering after lithotrity; but he sank under lithotomy, like one with the powers of life already exhausted to the last degree.

This case made a strong impression upon me. I wondered how a man could bear so much from lithotrity and so little comparatively from lithotomy. As he stood the use of the lithotritic apparatus so well, I asked myself how it might have been if I could have removed all the fragments which would not come away, and which by their irritation kept upon him all the sad sufferings from stone.

Some years afterwards my attention was further attracted to this subject. I felt dissatisfied with my experience of extracting stone from the female bladder, either by cutting or dilating. In July, 1854, a case of stone in the female came under my notice. The patient was three years old, and wishing to avoid dilatation, I used a lithotrite made for the purpose by Weiss, smaller than any which he had yet constructed. With this, and a scoop of the same size, I cleared the bladder in two operations under the influence of chloroform, and the case was rapid and perfect in all respects. I crushed first, and with the scoop extracted the fragments. With this I either extracted a fragment at once and entire, or jammed it so between the blades that I could withdraw the instrument (the blades containing the fragments) readily without serious damage to the urethra.

I was so much pleased with this practice and the instruments, that

I resolved to try further, on the first opportunity, in the adult. In December of the same year, a gentleman with a moderate-sized stone came under my notice. On the 6th, the stone was crushed under chloroform. On the 13th, several fragments having passed in the interval, crushing those remaining was resorted to. On the 19th a few had passed, but not all that were expected, and in consequence the small scoop was introduced, and the bladder was, after several manipulations, seemingly cleared. The next day the patient was so well that he left town to go a considerable journey. In May, 1858, nearly four years after, this patient came to town with some irritation like his former early symptoms. I examined, and detected stone. Having become in the interval, from further experience, more familiar with the use of the little scoop, I applied it here, and, without much trouble to myself or distress to the patient, extracted three small calculi, each about the size of a flattened pea. In a few days all irritation had ceased, and thus a cure was effected without even crushing, but simply by extracting. In July, 1859, I removed from the same patient an entire stone about half an inch in diameter, with the same instrument, and from that time he has remained free from disease.

Since the above dates I have almost invariably used these instruments in the process of lithotrity in the male. I have generally, as a first step, introduced a lithotrite of considerable size, equal to a No. 10 or 11 bougie, and broken the stone into various fragments. Next, I have taken the smaller lithotrite, above referred to, attacked these fragments, and then have used the small scoop with the object of removing several fragments, so that the patient might have satisfactory evidence that the stone had been crushed. In a few days after the small crusher and scoop have again been used—particularly the scoop, wherewith the fragments which have been found sufficiently small have been extracted singly, or two or three at a time. Thus, instead of waiting for the spontaneous escape of the fragments, a process usually both uncertain and tardy, the stone has been got rid of by direct and precise surgical interference.

If this practice be judiciously carried out, it will, under ordinary circumstances, prove an immense advantage; and in many instances a stone may be removed with a rapidity little short of the time needful for lithotomy, with the advantage that the patient need not be confined to his bed for a single day.

My chief object in this portion of my lecture is to draw attention to this subject. It is comparatively but little known; and, moreover, a very general impression prevails that it is incorrect to extract fragments. The various instruments and mechanical devices which have been from time to time recommended or used for this purpose, or to facilitate their escape, have generally proved of so little service that they have been in a manner overlooked or laid aside by the practical lithotritist. It has even been taught that no attempt should be made to extract fragments; and, as I have already stated, so strong is the feeling in this respect, when stone in the bladder is conjoined with paralysis of that organ, that the operation of lithotrity is considered highly objectionable, if not impracticable, because there is no likelihood of the fragments passing away, excepting through a large-eyed catheter or scoop made specially for the case.

With the instruments which it is my object to recommend, the process of lithotrity, and I believe the distress of the patient both bodily and mental, may be considerably abbreviated; and instead of paralysis being objectionable, it is perhaps the condition most favorable to the operation, as it generally happens that with paralysis there is a callousness of the mucous membrane of the bladder which permits a freer use of the blades than under ordinary conditions.

In early days a large instrument was thought essential for the due performance of lithotrity. The risk of bending or breaking was deemed considerable and serious, and on these grounds the largest instrument which the urethra would admit was selected for use. If a catheter or so-called scoop was used afterwards, its magnitude was thought of equal importance; and to give every advantage in this respect, it was recommended that the urethra should be dilated, and, if needful, the orifice in the glans enlarged by incision, prior to the use of lithotritic instruments.

As to the advantage of a larger urethra there can be no doubt; but I believe that large instruments are by no means so essential. Indeed I feel assured that comparatively small-sized ones are an advantage, and in certain stages of the treatment I believe them of great value.

The modern lithotrite, particularly of the best English makers, is a very superior instrument to those in former use; and less force is required to break an ordinary stone than was imagined. We seldom hear of an instrument of the kind either bending or breaking; and in the course of time I have come to the conclusion that one of small diameter permits of more ready manipulation than where the size is such as to fill, and be in a manner grasped by, the urethra. Hence, then, I have for many years employed lithotrites of smaller diameter than those in common use. An objection to small sizes has been made, because when the bladder is irritated to spasm the water escapes, whereas it would not if the urethra were filled (plugged) by a large instrument; but the escape can readily be prevented, if desirable, by grasping with the fingers and thumb. Even in regard to the quantity of water required in the bladder during the operation, I believe there is no such necessity for a large amount as some have imagined. When the organ is distended with eight, ten, or twelve ounces, the stone is usually more difficult to be caught than when the quantity is smaller. The slightest touch causes it to move where there is a large amount of fluid, and fragments are certainly much more difficult to be detected and seized. No doubt it is unwise, even dangerous, to open the blades of a lithotrite freely in an empty bladder, or one with very little water in it; but I have long been convinced that there is no need for the presence of so much fluid as some have thought.

The chief objections that I myself have found to very small-sized lithotrites or scoops are, the comparative difficulty of passing them into the bladder, and, especially, the comparative difficulty of sounding for fragments. In the finer manipulations of the sort it is hard to say whether the sense of touch or of hearing is of the greatest value. I am almost inclined to give the ear the preference; but even with this it is of the greatest consequence that the utmost facility of movement should be permitted, and hence I am averse to the use of the sounding-board, as recommended by Mr. Brooke and others, as also to the use of instruments which fill up the urethra to such an extent as to prevent the free movement of the point of the instrument within the bladder.

I was so early impressed with the necessity of having a narrow shank for a sound, so that every facility should be given to movement, that I had Heurteloup's sound, as it is called, modified accordingly. The shank was made of smaller diameter by several sizes than the curved end, and thus the latter was a sort of lob, which could be turned about readily in all directions, while its comparatively large size gave more certainty to both hand and ear. An instrument of this kind has been depicted in the later editions of my work on Surgery, and is now in considerable general use. A sound of this sort is of far greater value than one with a thick stem or with a slender stem and equally slender point; and, in accordance with my views on these matters, Mr. Matthews has lately constructed, on his own device, a lithotrite with a narrow stem and lob point, which, in my opinion, goes far to facilitate the effective use of the lithotrite in ordinary cases of stone. The force is applied by the rack and pinion, in accordance with my own views on this subject, but of course the same shape will answer for the various ways in which the screw force has been so admirably applied in modern times by Messrs. Weiss and Mr. Coxeter.

But these instruments are those to which I am most desirous of drawing attention. The small size must appear remarkable even to those familiar with the lithotrites and scoops hitherto known. I am not aware that any so small have ever before been made.

I have instruments of the kind in my possession varying in size from No. 3 to No. 6 bougie or catheter sizes, and with them I am in the habit, as I imagine, of diminishing the period usually devoted to the completion of lithotrity.

Generally when a stone is crushed the fragments are left to chance. So-called scoops and big-sized catheters have been introduced, and by the natural stream, or the force induced by injections, the fragments have been extracted, and have occasionally appeared in quicker time than if left solely to chance; but in the majority of instances the surgeon and patient have waited for the chance escape of the fragments without instrumental aid.

At this date there is ample experience to show that after a stone is crushed by one or repeated sittings, the fragments do come away, and a perfect cure is the result. But in many instances the last fragment is tardily discharged, and many weeks or many months elapse ere the cure is complete.

The chief object I have in view in these remarks is to establish this practice. Supposing a stone crushed and its fragments comminuted, my proposal is, that these should be removed at the same time, or as soon thereafter as may be. The lithotrites generally in use are so large that they can be withdrawn from the bladder only when shut. If a fragment rests between the blades, it must be comminuted before these can be closed. The same remarks are applicable to ordinary scoops. Comminution must be so effectual that the blades may be closed, or nearly so, and all that can be brought away is the small bruised portion held in the hollow between the blades.

With a small lithotrite and scoop, such as I am in the habit of using, a fragment of considerable size may remain betwixt the blades, and yet the united size or diameter may readily pass or be drawn along the urethra.

In the last sixty cases I have adopted this practice generally, and, with few exceptions, have had every reason to be satisfied. Occasionally, when over-anxious for a rapid cure, I have extracted fragments rather too large to come readily along the urethra, particularly in the prostatic or membranous portion, or at the triangular ligament. In some, when the urethra nearest the neck of the bladder has been rather roughly used, there has been considerable irritation; in others, even under such circumstances, there has been no irritation whatever; and in many instances I have been able to effect in one or two operations within ten days what, according to custom, would take weeks, or possibly months. I have done, in fact, by a precise surgical manipulation, that which according to ordinary rule is left entirely to chance. Experience has taught me that it is almost hopeless to trust to chance in all such cases; that in many instances the fragments may be weeks, or months, in coming away, even with attempts to coax them through catheters with large eyes and other instruments devised for the purpose. Here are the fragments of stone crushed in a man whose bladder acted regularly, yet only a few of these passed spontaneously; all the rest were removed by the scoop in question in three or four operations. From first to last there was not a single bad or even troublesome symptom. The patient was detained scarcely an hour in bed beyond his regular period of rest. I never saw one suffer less distress; yet, before he came under my notice, he had been strongly urged by an eminent surgeon to submit to lithotomy.

It is considered an extreme misfortune for a patient to have stone in the bladder and paralysis of that organ at the same time; and it has been well nigh a rule in surgery that lithotrity is scarcely eligible in such cases, on the ground that the fragments are not likely to be expelled or carried off by the stream of urine through the urethra or a catheter. Here are the fragments of a large stone from the bladder of a patient who could not pass a drop of water without the aid of a catheter. All of them, with a few minor exceptions, were extracted with a small scoop.

The mechanical development, if I may so call it, of stone shows the uncertainty of its spontaneous expulsion from the bladder. Most calculi have each a nucleus far smaller than the diameter of the urethra, but how few such nuclei pass? At all events, stones larger than the diameter of the urethra—nearly all the instances in which lithotomy and lithotrity have been performed—are examples where small round bodies (the nuclei) have not passed away spontaneously.

Now, I claim for surgery the power of taking away such bodies. I do not profess originality in this respect, for we all know what was done by Sir Astley Cooper in this way; but the instrument he used in removing small calculi—gravel, we might say—is of inferior mechanical powers to the modern lithotrite. It would be of little use in dealing with fragments in lithotrity; nor would the ordinary lithotrite or scoop be of much use in what I now speak about.

The small instruments which I now show are essential to the practice which I advocate, and with these I maintain (as I have amply tested in numerous cases) that lithotrity can be abbreviated and brought to a certainty such as has not been claimed for it hitherto.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, AUGUST 25, 1864.

Recent Progress in Surgery.—The occasional summing up, by eminent members of the medical profession, of the principal improvements and discoveries in the special departments of medical science to which they have devoted themselves—the judicial survey of the whole mass of assumed and positively valuable additions to our stock of professional knowledge or of means for the relief of suffering humanity—must always be of immense advantage and interest to physicians. The quantity of genuine wheat hidden in the chaff which burdens our weekly journals is so small, that we cannot be too grateful to those who are willing to sift it out for us and give us the pure grain for so much that is more filling than satisfying. The small amount of time which active practitioners have for professional reading makes such résumés all the more valuable to them; and they thus serve the purpose of making positively prominent those things which are worth preserving, while the form in which they are presented makes them eagerly sought by those who, under other circumstances, would hardly come to the knowledge of them. It is with this feeling that we have given so much space in our pages to a reproduction of Prof. Fergusson's instructive lectures, and it is with a similar feeling that we have read the admirable address of Dr. J. Mason Warren, delivered before the Massachusetts Medical Society, at its last annual meeting, which bears the title which stands at the head of this article.

This address, when originally delivered, had not a fair chance to be heard. The wretched acoustic properties of the hall in which it was delivered limited the real audience to the fortunate few who happened to be in the immediate vicinity of the speaker. To the larger number of those present, therefore, the published discourse must be as new as if they had not heard a word of it before.

The address we find to be a condensed review of the author's experience as a surgeon during the past thirty years. Paying an introductory tribute to the principal addresses of a philosophical character, so to speak, which have from time to time reflected the prevailing sentiment of the profession here on the theory and practice of medicine, the author comes to that department which has especially engaged his attention, and shows that in the theory and practice of surgery, also, there has been introduced a more enlightened spirit and a more rational practice. His own experience has shown him, within the sphere of his practice in this city, the most decided change in the immediate results of some of the capital operations of surgery, leading to a necessary change of treatment, and due, as he shows, entirely to its impaired hygienic condition, from the rapid increase and consequent crowding of the population. Such facts are too often overlooked, and too often we see operations unsuccessful and valuable lives sacrificed in town, from the simple failure or unwillingness to recognize the immense importance of this fact. Encouraged by the statistics of successful operators in other places, how often, for instance, has the operation of ovariotomy been done unsuccessfully in our large cities of late years, when in the purer air of the country it would undoubtedly in many cases have been attended with a happy result! We cannot recal a single instance of a fortunate termination of this operation in Boston, while the cases of Dr. Kimball, which we have of late been publishing, show an almost invariably successful result; a result, without at all detracting from the professional skill of the operator, undoubtedly to be ascribed in a very considerable degree to the healthfulness of the locality in which the operations were done. The same unwillingness to turn aside from the established routine, Dr. Warren shows, operated in Paris to keep surgery there behind that of England and America for years.

Passing from a short notice of anæsthetics, Dr. Warren takes up the special operations of surgery. Lithotrity has grown up under his immediate observation, the operation being a great novelty just at the time of his first visit to Europe. The occasions for its use have greatly multiplied here of late years. Dr. Warren shows that during forty years of the experience of his distinguished father up to 1844, all the operations for stone in this city had been done by him, and they only numbered twenty-five; and of these only three were natives of Boston or its neighborhood. Whereas the author has himself "operated on rather more than thirty cases, and the operation has been frequently done by other surgeons. Most of these cases were from a distance, and but four or five belonged to Boston. Two thirds of these were operated on by lithotrity, and, as well as those by lithotomy, have proved successful."

We cannot follow Dr. Warren through his interesting remarks on fractures and dislocations, but would call special attention to his observations on *dislocation of the shoulder, with fracture of the neck of the humerus*, and *dislocation with supposed fracture of the acetabulum*, as being of great interest and importance.

From the chapter on amputations we copy the following statistics of these operations in the Massachusetts General Hospital :—

Total of Cases from 1822 *to* 1860.

Thigh, ...	174	recovered,	136	died,	38	per cent. of deaths,	22.8
Leg, ...	144	"	110	"	34	" " " "	23.6
In lower extremity,	318	"	246	"	72	" " " "	22.6
Arm	31	"	27	"	4	" " " "	12.9
Fore-arm	31	"	28	"	3	" " " "	9.7
In upper extremity,	62	"	55	"	7	" " " "	11.3

Total of amputations (except of hip and shoulder), 380; recovered, 301; died, 79; per cent. of deaths, 20 8.

Amputations at Hip- and Shoulder-Joints from 1850 *to* 1860.

Hip, . . .	2	recovered,	1	died,	1 . . .	Per cent. of deaths,	50.0
Shoulder, .	16	"	10	"	6 . . .	" " " "	37.5

In the operations for fissure of the palate, as our readers will have noticed in Prof. Fergusson's lectures, Dr. Warren has introduced some very important innovations which have contributed largely to their success. These operations, he says, he has now done about ninety times, and, with the exception of half a dozen cases, has "never failed to get more or less union of the soft parts: and it is a remarkable fact, that, in the most extreme cases of very wide fissure, the operation has been as successful in improving the voice as in cases of the simplest character confined to the soft palate only. The most essential point is, I am sure, to establish the velum throughout the greatest possible extent; and just in proportion as this end is attained will be the degree of perfection with which articulation will be finally performed."

Dr. Warren goes on to take up the more important operations in surgery in turn, illustrating each by practical remarks based on his own experience. Of the comparatively simple operation of removal of the tonsils, but one attended with great benefit to the patient, he says :—

> "By the simple guillotine instrument—introduced by Dr. J. C. Warren—the operation may be performed without danger, and hardly compels the patient to abstain from a single meal. I have performed this operation from five hundred to a thousand times, and have never lost a single patient from it, nor had a single case of dangerous hæmorrhage. In two instances where I have seen it done by the modification of Fahnestock's instrument—which requires the tonsil to be fixed with a fork, and the section made by drawing the knife instead of pushing it—I have known troublesome bleeding to occur."

Dr. Warren's address concludes with a graceful and well-deserved tribute to the Surgeon-General of the State, and those gentlemen of the profession here who in an official or private capacity have contributed so much to the professional care of our soldiers or to the general welfare of the whole army; and an obituary notice of some of the most marked among our professional brethren whose career has closed during the past year. A few quaint selections from the Hindoo Shastras on the duties of physicians bring it to a close. As a whole, it is a most excellent practical discourse, and will be regarded hereafter as a most valuable historic record of the precise condition of surgical practice in this city at the present day, and a contribution of permanent worth to the archives of our State Medical Society.

Responsibility of Physicians in Confidential Cases.—In our article under this caption, published in No. 22 of the last volume of this Journal, in one of the cases introduced for the purpose of illustrating the subject, we learn that it is claimed great injustice and injury was done to one of the parties alluded to, and undeserved censure was conveyed in the language employed. As we have no desire to assume a judicial prerogative in the case, but to act with perfect fairness to all concerned, we willingly admit the following statement:—

Messrs. Editors,—The "Correction" in your Journal of the 11th inst., does not cover the whole ground of complaint. The main fact with regard to the withdrawing of the slander suit was there correctly stated; but in the declaration of the plaintiff in that suit no mention was made of the anonymous communications which the plaintiff still claims were written and circulated by the physician who was the defendant. And inasmuch as he neither admits nor denies the authorship of the alleged anonymous correspondence, and refuses to give a satisfactory explanation as to the motive which prompted his alleged conduct, the injured party claims that he was justified in laying the particulars of his case before the body of physicians of which that physician was a member, or to address any association competent to act upon the unprofessional or dishonorable conduct of its members.

Your editorial comments, therefore, upon the course pursued by the gentleman claiming to be injured in this case are evidently undeserved; and it is hoped by admitting this statement to your Journal you will do what you can to compensate him for the pain and annoyance they have caused him.

A Friend of Truth and Justice.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, August 20th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	63	58	121
Ave. mortality of corresponding weeks for ten years, 1853—1863,	51.6	51.6	103.2
Average corrected to increased population	00	00	113.5
Death of persons above 90	0	0	0

To Correspondents.—Papers have been received from Drs. P. F. Doggett and J. M. Sharkey, S. K., Chiron, from Massachusetts Surgeon-General's office, and from University Hospital, New Orleans.

Deaths in Boston for the week ending Saturday noon, Aug. 20th, 121. Males, 63—Females, 58.—Abscess, 1—accident, 5—congestion of the brain, 2—disease of the brain, 5—bronchitis, 1—burns, 1—cholera infantum, 20—cholera morbus, 1—consumption, 11—convulsions, 6—diarrhœa, 8—dropsy, 1—dropsy of the brain, 4—drowned, 1—dysentery, 8—epilepsy, 2—exhaustion, 2—scarlet fever, 2—typhoid fever, 3—gastritis, 1—hæmorrhage, 1—disease of the heart, 1—hydrocele of the neck, 1—infantile disease, 3—disease of the kidneys, 2—congestion of the lungs, 1—disease of the lungs, 1—inflammation of the lungs, 4—marasmus, 3—old age, 2—paralysis, 1—premature birth, 1—puerperal disease, 1—smallpox, 1—teething, 1—thrush, 1—unknown, 9—whooping cough, 1—erosion of the womb, 1.

Under 5 years of age, 69—between 5 and 20 years, 8—between 20 and 40 years, 24—between 40 and 60 years, 11—above 60 years, 9. Born in the United States, 96—Ireland, 19—other places, 6.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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INTERESTING CASE OF GUN-SHOT WOUND.

[Communicated for the Boston Medical and Surgical Journal.]

JUDGE A. M. H., æt. 58, a resident of this city, received, at the hands of Capt. C. M. W., a gun-shot wound in the left chest, inflicted with a rifle at the distance of fifteen feet, on the 19th of July, 1853. The extent of the injury, and the results arising therefrom, present one of the most remarkable cases on record. The parties were strangers to each other, and at the time of inflicting the injury no controversy was held, in words or otherwise. The alleged cause of the shooting was that Judge H. allowed himself to be retained as counsel against Capt. W. in a land suit involving heavy interests outside of the property in controversy; Capt. W. being a heavy land owner, and the original proprietor of the city of Stockton.

As stated, the wound was inflicted with a rifle, the bullet supposed to run between thirty and forty to the pound, and at the distance of about fifteen feet. The ball entered the back about one and a half inch from the spine on the left side, striking the upper edge of the eleventh rib and deflecting upwards, striking the lower edge of the tenth rib, thence continuing the line of deflection upwards, passing through the pleura and substance of the lung, and lodging under the skin about half an inch from the left nipple, whence it was removed by a very trifling incision. The points of ingress and egrees indicate the deflection and track of the ball. It was apparent, from the symptoms presenting themselves, that the intercostal artery, the pleura at both points posteriorly and anteriorly, and a plexus of the great sympathetic nerve were injured, with complete perforation of the left lung. It was also apparent that the pericardium was touched and bruised, but not penetrated. This remarkable wound did not bring the gentleman to the ground. Deeming himself fatally wounded (with remarkable coolness and self-possession he walked a full block in distance without aid or assistance before he fell, it being dark and no person immediately present), he made what he supposed a dying declaration or statement as to the manner of receiving the injury and the name of the perpetrator. On being removed to his residence, he received such medical assistance as was at command in Stockton. He was confined to his bed about six weeks, after that period was taken out occasionally in a carriage, but in a remarkably feeble state, which continued for a long time, and up to the present he still suffers from the shock to the nervous system, though in other respects he has the appearance of better health than he has enjoyed for a number of years.

The wound in this case may be properly denominated a mortal wound, and was so pronounced by his medical attendants; and his recovery presents points of great interest to the surgeon and physiologist. It may be well to state that a considerable quantity of blood was discharged into the cavity of the chest, and fully two thirds of the left lung was rendered useless for a long time, caused by the filling of the cells. The chest also became tympanitic, with effusion in the posterior part. These results have been removed to a considerable extent by absorption.

Two months after receiving this severe injury, he was seized with a rheumatic affection, connected with slight paralysis in the right arm and hand. This attack, doubtless developed by the nervous shock produced by the wound, as it was the first attack of the kind he experienced, has been uncommonly obstinate. He is still crippled with it, but is completely cured of dyspepsia, with which for a long period preceding the injury he was afflicted. For years he has been very feeble and fragile, weighing about 135 pounds, is of a bilious, nervous temperament, the mental largely predominating over the physical, a victim of dyspepsia for the last thirty years and under almost constant treatment for that disease; withal exhibiting wonderful mental and physical elasticity, often wearing out healthy and able-bodied men in the practice of his profession. He is also possessed of great coolness and firmness of purpose, notwithstanding his temperament. These attributes are necessary to be understood, as they doubtless enter largely into the pathology of his case.

Another fact may be stated as an important one in the history of the case. In earlier life Judge H. qualified himself for the medical profession, but abandoned it nearly thirty years since for the bar. Yet he still keeps up an interest in the former, arising probably from his ill health, which naturally leads him to the consideration of questions connected with medical science. This last fact gave to his medical attendants peculiar advantages, as was remarked by one of them in giving testimony, in a suit against Capt. W. He stated that "Judge H.'s recovery and his continued immunity from dangerous consequences depended in a considerable degree on his remarkable power of discrimination, indicating symptoms before being completely established, thereby enabling him to resort to a prophylactic treatment."

The foregoing statement of the case enables us to draw some deductions of an interesting character, as well as to demonstrate an important lesson to the surgeon and physician, viz., never to abandon a case of disease or injury until death is a self-evident result. For in this case we understand that Judge H., after the first ten minutes had gone by, never gave himself up to death, but was cool, deliberate and clear in intellect, reasoning and judging of his injury as well as suggesting its treatment. Respectfully,

San Francisco, July 23d, 1864. JAS. M. SHARKEY.

THE HEALTH OF NEW ORLEANS.

[Communicated for the Boston Medical and Surgical Journal.]

THE question of the local or imported origin of yellow fever in New Orleans has for many years been discussed by the profession of that and neighboring cities, and with very little prospect of solution until the Federal occupation of the city settled that with many other vexed questions.

The idea that local filth and uncleanliness was the cause of yellow fever, is well set forth in the following extract from the *New Orleans Picayune* of Aug. 10th, 1864:—

"We are now nearly at the close of the third summer since the re-occupation of the city by the Union troops, and during that time no well-authenticated case of yellow fever in the city has been reported.

"For many years there has been a very animated controversy among the New Orleans members of the medical profession as to how yellow fever in this city was produced. One party has strongly contended that it was imported from places where the fever was prevailing. The other party has quite as strongly contended that the fever, whenever it committed its ravages in our good city, was produced by miasma.

"The experience we have had during three summers, would seem to have pretty effectually settled the controversy in favor of the party which advocated the non-importation doctrine. Yet it may not be so. True it is that the quarantine regulations have been strictly enforced. Equally true it is that for years previous those regulations were strictly enforced; yet the yellow fever prevailed year after year in a greater or less degree, and in some years committed awful ravages in the city. How is it, then, to be accounted for that during three summers, with the same quarantine regulations enforced as formerly, not a single case of yellow fever has been reported?

"Some persons say that it is easily accounted for by the fact that our trade with foreign ports, where the yellow fever is a yearly scourge, has so greatly diminished, that we are almost entirely freed from those malign influences to which we were formerly subjected. These persons, of course, still uphold the importation doctrine.

"Others say that our freedom from yellow fever, during this and the two preceding summers, may be much more satisfactorily accounted for. They do not argue against the enforcement of quarantine regulations as a means of prevention. On the contrary, they are in favor of continuing those regulations, somewhat modified, in force. Their theory is, that when malaria pervades the atmosphere (persons subject to its pernicious influence being predisposed to disease), and a vessel arrives with a yellow fever case on board, the fever is at once communicated, and then quickly spreads. It is, then, the doctrine of these persons that where there is no malaria there is no danger from yellow fever to be apprehended. We incline to agree with them.

"In support of their theory we point to facts apparent to all our old citizens. During this and the two preceding summers, sanitary regulations have been enforced with a strictness never before known; the streets have been kept cleaner than at any time 'within the memory of the oldest inhabitant;' no longer do we see heaps of street sweepings and filth festering in the sun for days and weeks, and the gutters filled with feculent matter; the drainage of the city is more complete and better attended to than ever before; the draining canals in the rear of the city have been thoroughly cleansed, and the draining machines are kept in constant motion. Thus the city is, to a very great extent, freed from those noxious influences, so detrimental to health, to which it was formerly subjected.

"In view of the fact that since the commencement of these sanitary improvements we have not had a case of yellow fever reported, who can doubt that the improved health of the city, notwithstanding the presence of a large migratory population, is mainly owing to the strict enforcement of well-devised sanitary regulations, and to the increased cleanliness of the city?"

Per contra, the New Orleans *Era* of the next day, while admitting the value of sanitary regulations, wishes to make the thing sure by a strict quarantine system. The views of the *Era* will probably meet those of most physicians who have lived in this city:—

"The *Picayune* cannot be more strongly in favor of rigid sanitary measures than we, or attach greater importance to their strict enforcement; yet we cannot agree in its general conclusions on the important subject it discusses. We do not believe that the exotic nature of the dreaded scourge is disproved at all by the experience of the last three summers—on the contrary, we think the theory that it is exotic is greatly strengthened. Unless we are misinformed by those who ought certainly to know, it is not true that the same quarantine regulations were in force before the glorious event of the occupation of the city by the Union forces, that have been enforced since. We are told that quarantine regulations were formerly very lax, and that their enforcement was more nominal than real. We doubt not that without the rigid quarantine system we have had, the yellow fever would have visited us every summer as it did before, and we cannot at all agree with the opinion which our contemporary seemingly entertains, that the quarantine regulations should be 'somewhat modified,' if by such modification is meant the slightest relaxation of its fullest rigor and efficiency. However clean the city is kept, the arrival of an infected ship would undoubtedly make us speedily repent the folly of relaxing quarantine rigors. Let us have a strict quarantine and a clean city, as we have had under the rule of the 'Yankee invaders,' and we believe we shall continue to boast of as healthy a city as there is in the United States."

Whichever view be taken, one thing is certain—we have had no yellow fever here; and thankful for that, we accept both the strict quarantine and the cleanliness now enforced in this city, as the only sure safeguards against this heretofore dreaded scourge. Nothing seems to be wanting but the old love for the "Flag of the Free" to render New Orleans the most delightful and one of the most healthy cities in the Union. S. K.

New Orleans, Aug. 13th, 1864.

PROF. FERGUSSON'S LECTURES ON THE PROGRESS OF ANATOMY AND SURGERY DURING THE PRESENT CENTURY.

Lecture V.—On Excision of the Knee.

Mr. President and Gentlemen,—In preceding lectures I have referred, again and again, to excisions or resections as being characteristic of modern surgery. These terms are applied in various ways and directions: to cutting, scraping, and gouging, after the rare old fashion of Hey the great, of Leeds; to the removal of exfoliations and sequestra, as Nature thrust these effete parts before the eyes and hands of surgeons; to the extraction, with judicious cuttings, of small or large portions of the long or flat bones; to the separation of entire bones with, in many instances, a boldness and skill adding romance, as it were, to the art of surgery; to the ablation of a phalanx, or of the whole scapula; and to the excision of the ends of bones constituting movable and important articulations. These are themes worthy of the highest reach of practical surgery—worthy of all that one in my position could say concerning them, and more than worthy of the humble efforts which I can make to bear upon them.

Thanks, in my opinion, to the skill, labor, judgment, and forcible example of the Professor of Clinical Surgery in the University of Edinburgh, excision of the elbow-joint has now become "a great fact" in surgery. Where there is doubt or mismanagement on this subject, surgery is at least thirty years behind. To the same authority, aided largely by examples from military practice, we may attribute our confirmed ideas regarding the advantage of excision of the head of the humerus in appropriate cases. Excisions of the ankle and hip have each been largely developed by our youngest Councilman, Mr. Hancock. These, the wrist, and even the joint of the great toe, have all had the attention and action of your humble servant, but in none of them have I taken such personal interest as in excision of the knee; and I mean to devote this lecture to such a sketch of the subject as shall possibly give it further interest in the estimation of both those who have inclined towards it and those who have opposed it.

Whilst every anatomist recognizes the analogy between the upper and the lower extremity, the physiologist and surgeon sees a vast difference in their respective action, function, and position. In particular, in reference to our own matters, we have to recognize the difference in bulk, and the difference in that which is destined to carry and that which has to be carried. The upper extremity is carried; the lower has to carry. Man may be characterized by the largeness of his brain, by his superior intelligence, by his prehensile powers, or his qualities as "a cooking animal;" but there is no physical feature so characteristic of the genus *Homo* as the perfection of his lower or hinder extremities. Even the gorilla, supposed by enthusiasts to be next to the "missing link" to our frail humanity, falls endlessly behind man in respect of his lower or hinder extremities.

How or why, then, may I ask, have we surgeons been so callous on this subject? How does it happen that where disease of the knee-joint has been to all appearance incurable, we have heedlessly and recklessly removed one of the most perfect characteristics of our superiority of configuration in animal life? There is no denying the fact; and it has been a proud boast among us that when hectic has been running its uncontrolled course in conjunction with severe chronic disease of the knee, the malady has been suddenly arrested by the amputation of the limb. Something like natural sleep has been obtained within a few hours after this formidable ordeal; the pain of the wound has been as nothing compared with that of the disease; and the pulse has fallen rapidly towards a natural standard. To say the truth, there does, at a superficial glance, here appear a mighty and beneficial agency on the part of surgery. Yet it is obtained at an enormous sacrifice. A perfect foot, a nearly perfect leg, a considerable portion of a nearly healthy thigh, have been removed, and loss of life from the amputation has often followed. Yet, with all these drawbacks, the results of this operation have appeared so satisfactory that life has been willingly staked by both patient and surgeon, with the eager hope of safety and relief from that which has come to be beyond human endurance. Until a comparatively modern date it seems scarcely to have entered the surgeon's mind that better could be done; and so, in badly diseased knee-joints, there seems to have been no alternative between a painful and possibly shortened existence, and the chance of a formidable operation which involved great risk to life and included the actual loss of well nigh one fourth of the frame. Few seem ever to have thought that there could be any alternative, excepting that of letting Nature struggle on as she best might, in the faint hope that the disease would wear itself out; and so, when Park first announced a novel and successful expedient to remove the disease and leave a yet useful member, the fact made but little impression on either the profession or the public. It is specially worthy of remark in this theatre that the name of Park is associated in this history with that of one to whose memory we, in all reverence, and most worthily, give the utmost respect. It was a great honor done by the surgeon of the Liverpool Hospital to Percival Pott, of St. Bartholomew's, when, in 1782, he wrote "a few sheets, in which," to use his own language, "I hope to show that in some of the affections of the knee and elbow, in which amputation has hitherto been deemed indispensably necessary, surgery has yet another resource, which, as far as my reading and experience enable me to judge, has not yet been attempted by another practitioner . . . . . . the resource I mean is the *total extirpation of the articulation.*" Park had actually underlined the latter words, thereby, as it were, upholding impressively the originality of the expression.

Four fifths of a century have passed since Park thus wrote, and the latest echo to this grand announcement is thus recorded in 1861 by one of the present surgeons and lecturers on surgery: "The excision of joints does not find much favor at St. Bartholomew's. It has been practised only once, and that in the elbow." This refers to the year 1860.

But there are many excuses for the great Percival Pott. If he, as a leading star, took no action on such an announcement, he in this respect but resembled his fellow-mortals. Not a breath, not a pen, not a knife, stirred in England on the subject. Even Moreau the elder, although in a manner inspired by our English surgeon, failed to impress upon his immediate contemporaries any possible value of the "extirpation of an articulation." The modest effort from Bas-sur-Ornain was as little heeded as that from the banks of the Mersey. Although Park and Moreau had shown that which had not previously been dreamt of, each passed to his grave with hardly even a recognition by their contemporaries of the great things they had done. Like many poets and painters, their greatest fame has been posthumous, and my own impression is that even to the present day the value of their labors has not been thoroughly recognized.

It is a remarkable fact that, in referring to excision of the knee and elbow, Park invariably put the operation on the lower extremity foremost. This, doubtless, was because he had operated on the knee first in the living body. Although he suggested both operations, it was reserved for the elder Moreau to have the honor of first performing that on the elbow. This now famous operation was done 26th June, 1797, fifteen years after the date of Park's announcement. The ingenuous Frenchman gives Park his full credit, and in that respect differs from some of our own countrymen, who have evinced a disposition to award the honor regarding the early start of excision of the knee to Filkin, of Northwich, who, as stated by his son some twenty years after, performed this operation successfully in 1762. But Filkin's case, like that of Justamond's partial resection of the elbow, had no influence on Park's original conceptions. The knowledge of these cases came to him at secondhand afterwards, and he it was, in fact, who first gave them notoriety when publishing his second case of excision of the knee in 1789. Had it not been for Park himself these cases would probably have been shrouded in everlasting obscurity. They no more detract from the merit of the Liverpool surgeon than do the occasional excisions of the elbow (said to have been practised in the midland districts of England since his time) from the just credit due to Mr. Syme, of Edinburgh, for the revival of the operation.

My present time will not permit much further historical reference. Suffice it to say, that a profound slumber closed upon the efforts of Park and the Moreaus until within our own period. A few spasmodic efforts seem to have been made from time to time, and among our own countrymen none were so remarkable as those of Hewson, Crampton, and Syme. The first two were comparatively apathetic on the subject, and the proceeding was discouraged by the last, who some thirty years ago operated on two cases, from which experience he expressed himself unfavorable to the operation. Nothing, save the usual discouraging historical notice, was said of it for about twenty years, whilst during that time excision of the elbow became an established operation. Often and often had I myself felt deeply grieved to see a well-made foot, totally free from disease, and a leg on which the pathologist would scarcely glance, swept away by amputation in the thigh for disease in the knee. Often did I think of the casuistical expression of those who know no better that "amputation is the opprobrium of surgery!" Why, I thought, should excision of the knee in incurable disease of the joint not do as much in proportion as excision of the elbow in a similar condition? What but bulk, or comparative magnitude, constituted the great difference between the two operations? If excision of the elbow saved a useful hand and forearm, why should not excision of the knee be equally useful in saving the foot and leg? The comparative size of the limb and joint seemed the grand objection; but here it became a question whether excision of the knee or amputation in the thigh might prove most or least hazardous to life. These latter points seemed to me those of the greatest interest in regard to this proceeding; for whilst we had indifferent results as respects the condition of the limb after both operations, we had the recorded experience of Park regarding his first case, in referring to it six or seven years after, that the patient had "made several voyages to sea, in which he was able to go aloft with considerable agility, and to perform all the duties of a seaman; that he was twice shipwrecked, and suffered great hardships, without feeling any further complaint in that limb."

It seemed to me that this great question had never yet been investigated. One or two cases here and there did not appear to me sufficient to settle such an important matter.

In July, 1850, I performed the operation on a patient in King's College Hospital in whom all the circumstances seemed most favorable. Whilst there was painful disease, of which the patient was tired, and for which he willingly consented to amputation, there was youth, and apparent health elsewhere. The disease seemed limited to the cartilages, and I could not imagine a more favorable instance for the object I had in view. Yet nothing could have been more disastrous than the result of this operation. The patient died, after sufferings equal to any I had seen follow great operations. In particular, the starting of the limb appeared equal to, if not more troublesome than, any I had ever witnessed in compound fractures of the lower limb or after amputation. A *post-mortem* examination showed that acute necrosis of the lower end of the femur had ensued.

I confess that I was in some degree daunted by this case; yet, as I had seen as much local mischief and also death occur in equally promising cases after amputation in the thigh, I resolved to suspend my judgment. Not long afterwards, the late Mr. Jones, of Jersey, essayed the operation with more satisfactory results; and as time rolled on, his highly successful repetitions, as well as the operations of others, attracted the attention of many of the young surgeons of the day. Among these I may particularize Dr. Richard Mackenzie, surgeon to the Royal Infirmary of Edinburgh, who, although remarkably familiar with excision of the elbow, took the trouble of a distant journey and voyage to see Mr. Jones's cases and operations. The impression on his mind was such as to induce further investigation; and had it not been for his untimely death, in pursuit of professional knowledge and honor "at the cannon's mouth" in the Crimea, I have no doubt in my own mind that we might have had by this date an amount of evidence for and against that would have gone far to settle, in the minds of many who still doubted, the very important question as to the eligibility of this operation. Beyond the impression which my own humble exertions and example made, nothing went further for a time than that produced by the active practice of Mr. Jones. That gentleman, in a comparatively limited sphere, operated on fifteen cases, and in fourteen of these with success.

Various pupils of my own devoted special attention to this subject, amongst whom I may mention Mackenzie, Smith, Edwards, and

Price; but fortunately there were others on whom my personal influence might be supposed to have little effect, who wished to give trial to this comparatively novel proceeding, and thus the operation was practically tested on a pretty extensive scale. It seems almost invidious to mention names where so many are concerned, and it may suffice, particularly for my present purpose, if I refer to the writings of Mr. Butcher of Dublin, Mr. Pemberton of Birmingham, and Dr. Humphry of Cambridge. These gentlemen have, each in his own way, given remarkable notoriety to this operation, and it was at a still more recent date put again before the profession by Mr. W. M. Clarke, of Bristol, in a paper of great research which he read to the British Medical Association in August, 1863.

Excision of the knee seems, like all similar operations on other joints, a very formidable process, particularly when performed on the normal tissues in the dead, or when witnessed by any one not familiar with such operations on the living body. The destruction of tissues and parts, on the dead, before the component parts of a joint can be cut away, appears more than human strength can bear or survive; and the chaos of tissues, structures and surfaces, with, in most instances, the discharge and separation of blood, pus, and substance, perceptible in the living body, naturally lead any one, as yet uninitiated to this practice, to the conclusion, that for roughness, tediousness, magnitude, and irregularity of surface, the chances of the patient for limb or life are slender indeed. There is scarcely a coarser operation in surgery than excision of the elbow, yet in the present day no one objects to it either on that score or on any other, unless it be some old stagers, who adhere, even in the wane of the nineteenth century, to the customs of their grandfathers. Excision of the knee is simple and elegant in comparison, although it must look formidable in all respects to the novice. It is a common custom to compare amputation and excision, as regards local appearances and facilities of proceeding, and amputation invariably carries the palm. The clean incised wound in the arm or leg for diseases of elbow or knee seems what might be called a luxury to the patient when compared with the haggling process of excision. Yet in excision the member is left; in amputation it is gone! No human power can restore it. Look to the condition of one who has had his arm amputated for disease of the elbow-joint, and look to one who has had an equally successful excision. No artificial substitute can compare with the human hand!

If excision of the elbow has superseded amputation in the arm as a general practice for incurable disease of the elbow, why should the practice not hold equally good in the lower limb? That is a question which I for years put to myself—which I still do, though in a less uncertain mood; and it is a question which I avail myself of such an opportunity as this to put again to myself and the profession.

Who among us has yet discussed this question practically? A few gentlemen who have had considerable experience have declared in favor of the operation, and a few with less have evinced a leaning to the old system of mutilation. But the greatest objectors of all have been those who have had no personal experience whatever, or who possibly have formed their opinions upon a single case or two, where the result has been questionable or fatal. The subject has still to be dealt with fairly and dispassionately. I doubt if I can do either, although, possibly, having the largest personal practical experience on it of any man living. I fear that I am prejudiced, albeit my efforts in public practice have been made with the hope that by encouraging others to undertake the operation, I might one day be able to say with more forcible authority that the proceeding is one which should be either abandoned or adopted in the practice of surgery. I cannot say that my hopes in this respect have been realized. The proceeding has not been adopted as a practice in any great hospital in Britain, unless indeed I except that with which I myself have the honor to be connected. Many operations of the kind have indeed been performed in our public hospitals, and I feel bound to say that these have been chiefly what are called provincial and country. This is not the place, nor is it the time, to discuss the merits of hospitals within or without the line of the metropolitan or great school districts; but it is beyond a doubt that this proceeding has been more largely practised and more considerately dealt with in provincial practice than in the recognized and accredited metropolitan seats of learning and instruction. In Dublin, Jersey, Cambridge, Birmingham, Manchester, Aberdeen, Exeter, and Bristol, it has been more frequently performed than within the circle around Lincoln's-inn-fields. Next to King's College, I believe that it has been oftener performed at St. Thomas's than elsewhere in town; and in as far as I am aware, the experience in other hospitals of London has been so comparatively limited that we have no important data to go upon; for whilst the best results have ensued in some instances, the worst have occurred in others.

The value of this proceeding has been variously estimated by different writers. Usually it has been compared with amputations in the thigh, and the relative fatality has been the test; with some the rapidity of closing of the wound and discharge as "cured" have been thought of most importance; and with others the condition of the limb afterwards has absorbed most attention. Strange to say, the preserved limb has rarely, if ever, been compared or contrasted with a stump in the thigh, or with its intended facsimile as made out in the shape of a cork or wooden substitute!

The value of human life is comparatively so surpassing—the continued union of soul and body is of such importance in our estimation, that the chances of life and death must always form an exciting subject for consideration when an operation of importance is in contemplation; and here, as in other departments of operative surgery, it is right that a question of such weight should be placed first.

The largest number of cases treated by a single hand heretofore published is that by Mr. Jones; and, in as far as I know, the next largest is that by Dr. Humphry, related to the Medico-Chirurgical Society in March, 1858. Of thirteen cases, only one died; and in this paper the reserve step, which some who had practically thought of the operation advocated, was first prominently brought under notice. In the instances in which the operation seemed to have failed, amputation in the thigh was performed; and there were four such, of whom one died. Of thirteen excisions, twelve lives were saved. In how far a similar success as regards life would have followed amputation, had it been the chosen operation, no man can tell. Dr. Humphry candidly expressed his own opinion in concluding the paper referred to: that he "should not have obtained an equally good result by any other mode of treatment."

Hitherto all other lists from individual surgeons of this country have been fewer in number; and, still speaking in comparative ignorance, the cases which I myself have dealt with are perhaps the most numerous. I have now performed this operation forty times, and of these, no less than fifteen have died more or less directly from the operation. This fatality, it must be remarked, is wonderfully greater than that of the operations above referred to; and as regards the aspect which I am now considering, such large loss of life might go far to settle the question of fatality as compared with amputation of the thigh. Yet I am not disposed to acquiesce in this view. I may myself have been too zealous, and resorted to the operation where I should have selected amputation, when death would have passed as an ordinary chance. I cannot overlook that I had not the advantages for my patients of the pure air of Jersey or of Cambridge, of Exeter or of Bristol; nor can I even fancy that the site of King's College Hospital, on the verge of Clare Market and Drury-lane, although within touch of the Royal College of Surgeons of England, could be compared for salubrity with that of St. Bartholomew's, St. Thomas's, or St. George's. There is the authority in print of a famous London alderman, that Smithfield is the healthiest spot in London; and I cannot but think that if a like number of cases of this operation had been performed by the surgeons of the hospitals referred to, we might have had recorded a success well-nigh equal to that of Messrs. Jones and Humphry and the Bristol surgeons. But, even with the fatality following my own personal experience, I am not disposed to take an unfavorable view of the operation; for, looking to all that I have seen and done as regards amputation, I hesitate to say if I should have been successful in saving life to a larger extent, in the same individuals, had amputation been resorted to. Against this practice of my own I can place ten other operations in King's College Hospital, performed by my colleagues, with the death of only one patient; and this view of the fatality of the proceeding can be rapidly modified by adding such success as has been gained by Jones and Humphry. I know, moreover, that in certain provincial hospitals the results have been highly satisfactory. Besides the details published by Mr. Clarke, of Bristol, I may state that I was made acquainted, during a recent visit to the Exeter Hospital, with the marked success of the surgeons of that institution, who had operated in about a dozen cases within the last few years, without, as I understood, losing one.

The largest number of collected and original cases with which I am acquainted was made some years ago by my friend and former assistant, Mr. Price. The list amounted to nearly 250, and went to show that the fatality was pretty much the same in excision of the knee and amputation in the thigh. I do not think that as yet we have data of greater importance on this point. The success, or want of success, of amputation in the thigh, as detailed by Mr. James of Exeter, Mr. Bryant of Guy's, or Mr. Callender of St. Bartholomew's, can have no direct bearing on this question until a like number of cases of excision of the knee in the same or similar institutions can be brought to bear on the point. There is nothing in physiology, anatomy, pathology, or practical manipulation, which should make this operation more hazardous to life in proportion to amputation in the thigh, than excision of the elbow is in proportion to amputation in the arm.

My impression is that excision of the knee is, or should be, by proper treatment, as little destructive to life as amputation in the thigh, and if this be proved and granted, as possibly it may be in time, then I firmly believe that all other objections to this operation must pass away like those which so long retarded the application of excision to the elbow.

The time required for a cure, so called, has been a great element in this operation. It has been common in amputation of the thigh to dismiss patients from hospital, or to give up regular attendance, in the course of three, five, seven, or ten weeks after. Six weeks may be taken as a favorable average period to show the rapidity of cure. Little, or, perhaps. no notice has been taken of some small sores or sinuses still present; nor has the after-course of these, or of the stump, been specially referred to, excepting when, perhaps, many months or years after, there has been a necessity to repeat an amputation for an ill-conditioned stump, or to remove some portion or portions of necrosed bone. But even then a whisper has never been raised against amputation, or the particular kind of amputation; or, possibly, the surgeon who performed the operation may have been criticized freely, but the fault has never been (and very properly so in my opinion) laid to amputation itself as a surgical operation. In the elbow and shoulder, where excisions are extolled or sanctioned, the wounds are in reality often slow in healing; months—aye, years

—elapsing in even most satisfactory cases before the sinuses are perfectly healed. But in such instances the patients can move about with seemingly little defect. The arm can be carried; but if anything prevents the lower limb doing its proper carrying function the defect is more manifest. As the knee is big in proportion to the elbow, so may the entire healing process in excision be longer in proportion; and as the subsequent strain upon the lower limb is greater than that upon the upper, so must there be greater time given for a perfect result. These features, with a slight variety, are admitted between stumps of the lower and upper extremities, and they seem to me to be equally worthy of attention in the cases of excision.

But in my opinion a mistake has been committed in such comparison; for the wound in all great features is not different from that of amputation, and the continued presence of the lower part of the limb constitutes such an important fact, as compared with its absence, that it seems to me a waste of time and argument to dwell further on this question. The true comparison of excision of the knee is with compound fracture of the lower end of the femur or upper end of the tibia, possibly communicating with the knee-joint, or with a direct penetrating wound of the joint itself, which has exposed the interior to the surrounding air. If I am not much mistaken, the feeling in modern surgery is, that time is of little moment contrasted with a useful and therefore creditable limb. If months, even years, elapse before such results are effected, does surgeon or patient ever begrudge the time? Is there a surgeon of experience who has not felt his heart palpitate with pleasure on looking at one of these illustrations of the powers of nature, and of his own faith and skill, in bringing about such a pleasing conclusion? Suppose a compound fracture—say of the shaft of the tibia: has he not been gratified, even after the separation of inches of necrosed bone, to see a useful limb retained? Does he not feel in his heart that Ambrose Paré and Percival Pott did not live and suffer in vain?

As a compound fracture in the lower extremity is uncertain and slow in healing compared with a simple one, so may the wound in excision of the knee be compared with the healing of a stump. But, to put this part of my argument briefly and on a practical basis, I admit freely that such wounds are generally more slow—much more slow, in healing than others; yet I have seen after excision of the knee what I have never seen after compound fracture of the tibia—patients walking about freely, on crutches, eight weeks, six weeks, even three weeks afterwards; some even putting the foot to the ground with a pressure which no stump of the thigh could have borne at such a date. But I must refer to this subject again, and to give it justice I must bring others under present notice.

The condition of the limb afterwards has, perhaps, attracted most attention. In a brief lecture like this, and coming near the end of it too, it would be impossible to notice all that has been said on this subject. The result in Park's first case seems to have been almost overlooked. From 1789 until within these few years all by silent assent seem to have sanctioned the conclusion that a stump in the thigh and an artificial limb, whatever its kind, were better than protracted disease or death. Excision well nigh slept, and, with the exception of what has been done and said by Crampton, Syme, myself, and Jones, no one seemed to have thought seriously on the subject.—*London Lancet.*

Bibliographical Notices.

A Treatise on Gonorrhœa and Syphilis. By SILAS DURKEE, M.D., Consulting Surgeon of the Boston City Hospital, Fellow of the Mass. Medical Society, Member of the Boston Society for Medical Improvement, Honorary Member of the Medical Society of the State of New York, Fellow of the American Academy of Arts and Sciences, &c. Second Edition. Pp. 467. Price, $5.00. Philadelphia: Lindsay & Blakiston. Boston: Ticknor & Fields. 1864.

WE had the satisfaction of noticing, at considerable length, the original volume, a second edition of which now lies before us, and we heartily congratulate the author upon this palpable evidence of success. The profession has not been slow to recognize what we especially insisted upon in our former article, viz., the eminently *practical* nature of the work and its adaptedness to the wants of the busy practitioner.

Contrary to the usual custom, we will comment, first, upon the mechanical execution of the book—its countenance—its exterior bearing. In our opinion, this is greatly improved. The form and getting up of the volume is more elegant, the paper is smoother, the type most excellent, and the illustrations seem to be better finished and more truthfully colored. These will greatly aid the practitioner in diagnosticating the venereal affections of the skin. The paper is somewhat thinner than that used in the first edition, and this accounts for the non-increase of bulk, notwithstanding the very considerable additions which have been made to the text. Messrs. Lindsay & Blakiston deserve the greatest credit for the manner in which the book appears, and we feel confident they will reap a due reward. They have, long since, established a reputation for good taste, and just and generous dealing with the authors whose works they publish.

We propose to indicate the improvements and additions which have been made by the author in his useful volume. Before specifying these, we quote from the "Preface to the Second Edition," the following paragraph:—"In my endeavors more perfectly to present a rational course of treatment of the various phenomena of venereal affections, and to acquaint my readers with the latest suggestions of those whose enlightened experience and position entitle them to be heard, I have diligently consulted the most substantial medical literature, up to the present day, and have incorporated into these pages whatever has been deemed essential to a thorough and practical comprehension of the general subject, and conducive to a knowledge of the most modern and successful methods of conducting individual cases as they may, from time to time, occur."

The improvements and additions we find to be the following. *First:*—Table of Contents.—We are glad to see a very full and accurate "Table of Contents." Next to a good index, we think this the most essential thing to be attached to any scientific work; and we are occasionally much surprised at the neglect of highly reputable writers in this respect.

Secondly:—Formulæ of Remedies.—The judiciously selected and excellent "Formulæ of Remedies" strike us as a most useful feature. The author has evidently bestowed much attention upon this portion of his labors.. In certain instances, we are opposed to long formularies, appended to medical works, as liable, perhaps, to induce a routine copying of others, instead of fostering self-reliance. We do not consider the list under remark as coming within the above category. Many general practitioners, not constantly conversant with venereal affections, will gladly and properly rely upon it for remedial recommendations and prescriptions which have received the sanction of long experience at the hands of an expert. We observe one or two slight inaccuracies in the formulæ, and which have also been detected by the author. *Aluminæ* occurs, twice, instead of aluminis; and, instead of *Tanninæ*, Acidi Tannici should have been written. The proportion of sugar in the last formula under the caption of *Gleet*, should have been ʒiij., instead of ℥iij.—a matter of no great importance, but worth mentioning, perhaps, among the slight inaccuracies.

Thirdly:—Topical use of Chlorate of Potash.—Among other *topical* applications highly esteemed by our author, we observe the following, in regard to the *chlorate of potash*. "The chlorate of potash is a useful article to be employed in arresting any phagedænic tendency, and inducing healthy action in the ulcerating surface. Internally, it may be given, dissolved in barley-water, to the amount of a drachm during the day. As a topical application to the ulcer, the annexed formula can be advantageously employed:—R. Potassæ Chloratis, ʒ iv.; Aquæ Destillatæ, ℥ viii. M. To be constantly applied, as a dressing, by means of lint."—(P. 243.) The author refers to *Guy's Hospital Reports* (vol. vii., p. 331) in this connection. A further recommendation of the remedy occurs on page 247 of his own volume. A formula employed at the Royal Free Hospital of London is given. The solution of the chlorate is made slightly acid by hydrochloric acid, and is found to be "an excellent detergent and antiseptic in chronic fœtid, suppurating ulcers, wherever situated." Also, when any tendency to *sloughing* exists.

Fourthly:—Internal Organs affected by Syphilis.—Among the additions to the volume, we remark some brief, but very interesting observations relative to venereal affections of the internal organs—as the lungs, the liver, peritoneum, thymus gland, larynx, &c.—(Vide pp. 442—451.)

Fifthly:—Infantile Syphilis.—Several pages have been added to the chapter on *Infantile Syphilis*; the whole constituting a very interesting and important portion of the volume.

The book, in its first edition, received the unqualified approbation of the most distinguished surgeons in the army and navy, as well as of those members of the profession who are engaged in civil practice. The testimony of medical teachers has also been freely given in its favor. We are confident that its merits, as "revised and enlarged," will be widely and promptly appreciated. W. W. M.

Boston, Aug. 19*th*, 1864.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, SEPTEMBER 1, 1864.

MODERN HOMŒOPATHY.—Among the many interesting and important results which have followed the crime and subsequent judicial investigation in the case of La Pommerais in Paris, there are some points worthy of attention, which, on account of the startling and extraordinary nature of the events with which they are associated, have remained unnoticed by the medical press. They are only indirectly connected with the case itself, but are important as they afford us the rare opportunity of a thorough and scientific examination of the homœopathic materia medica. The character of many of those who practise homœopathy amongst us with such rapid and great prosperity, and the well-known nature of their scientific education and attainments, indicate how little the man, and how much the name or the system, have to do with such success; and when we consider that the strongest advocates of the system are to be found among women and ministers, and that the best educated of its practitioners do not hesitate to ridicule its principles and to confess to their patients their willingness to treat them "both ways," there remains little but the name, and the practices it conceals, to explain the influence it still exerts. Ask any head of a family, who unhesitatingly entrusts its members to the care of a person of whose antecedents nothing is known, why they act in this way, and they will answer that homœopathy cures and does not use strong or dangerous medicines. The matter of individual skill or character is of secondary importance; it is the system they trust. But were it generally known that, instead of the inert playthings sold under the name of homœopathic family medicines, the most powerful drugs in their most concentrated forms, and in full doses, are used against disease by homœopathic practitioners whenever nature cannot do her own work, and very often when she can, the public might come to recognize the deceit practised upon it. To comprehend, however, the great and simple truth, that men to whom medicine is indebted for all its progress in pathology, anatomy, chemistry, psychology, natural history and surgery, men of great minds and liberal education, that these men should also be the fairest judges of the treatment of disease, is perhaps more than we can expect of the public in our generation.

Now not only do some of the educated homœopathic medical men honestly confess themselves dishonest in this matter of drugs and their administration, but we have often had opportunity to verify such deceit by analysis of specimens left at the bedside, specimens which contained full doses of powerful alkaloid medicines. We were not surprised, therefore, to find our limited experience corroborated by the results of the judicial process against La Pommerais. This person, as we have before stated, was a homœopathic practitioner, and it became the duty of the chemists employed by government, in the course of their investigations, to examine the specimens of materia medica in his possession. A long catalogue of the articles thus found is published. It would be impossible to enumerate them here, and unnecessary; it is enough to say that they would make a very complete collection for any professor of materia medica. The strongest acids, the most concentrated tinctures of nearly all the active vegetable substances, and nearly all the mineral salts and metallic compounds were found in large quantities. With these there were also other and inert articles used only in homœopathy, but in small quantities. Among the active substances, of which the quantity appeared to the scientific commission to pass all reasonable limit, are mentioned the following:—1. Four bottles containing considerable doses of arsenious acid; 2. Three packages containing enormous doses of corrosive sublimate; 3. Sulphate of copper; 4. Powder of black hellebore, 125 grammes; 5. Powder of nux vomica, 250 grammes; 6. Powder of stramonium, 250 grammes; 7. Powder of aconite, 250 grammes; 8. Powder of cocculus indicus, 250 grammes: 9. Powder of colocynth, 62 grammes; 10. Powder of belladonna, 250 grammes; 11. Powder of hemlock, 125 grammes; 12. Powder of digitalis, 125 grammes; 13. Hydrocyanic acid, *au quart*, 30 grammes; 14. Oil of croton tiglium, 30 grammes; 15. Muriate of morphia, 4 grammes; 16. Strychnine, 4 grammes; digitaline, 2 grammes.

These, it will be seen, are mostly deadly poisons. It may be said in reply that these were but the substances from which the ordinary dilutions were prepared; but such a view is absurd, as these quantities are sufficient to supply the whole city for a century, if used according to homœopathic formulæ. It is only by making the public acquainted with such facts and the deceit of modern homœopathy, not by arguments against the system, that we can convince it of its worthlessness.

Messrs. Editors,—My attention has recently been called to the following extract from the General Statutes of Massachusetts, Chapter 26, part of Section 30:—

"Superintendents or officers of all (other) institutions supported or aided by the State, shall at the expense of their respective establishments or institutions cause all the inmates thereof to be vaccinated immediately upon their entrance thereto, unless they procure sufficient evidence of previous successful vaccination within five years."—*General Statutes of Massachusetts*, 1861, p. 192.

I desire to submit my opinion that the above requirement ought to be somewhat modified; on the ground that the febrile condition resulting from vaccination would be decidedly dangerous in many cases. For instance, to a woman in childbed; to persons about to undergo important surgical operations; to patients suffering from acute diseases, such as typhoid fever, erysipelas, &c.; and also that it would be dangerous to persons in weak states of health, as those disposed to phthisis.

For myself, I should consider it bad medical practice to vaccinate such patients as those just referred to, and doubt not that many of my professional brethren will agree with me. G. H.

Aug. 18*th*, 1864.

THE following is the President's order confirming the sentence in the case of Surg.-Gen. Hammond, tried upon charges of "disorders and neglects, to the prejudice of good order and military discipline," "conduct unbecoming an officer and a gentleman," and "conduct prejudicial to good order and military discipline":—

"The record, proceedings, findings, and sentence of the court in the foregoing case are approved; and it is ordered that Brigadier-General William A. Hammond, Surgeon-General of the United States Army, be dismissed the service, and be forever disqualified from holding any office of honor, profit, or trust under the Government of the United States. A. LINCOLN."

"*August* 18, 1864.

THE LATE DR. JONATHAN KNIGHT.—At a meeting of the New Haven Medical Association, held Aug. 26th, at the house of Dr. N. B. Ives, the following resolutions were adopted:—

WHEREAS, Dr. Jonathan Knight, a member of this Association for over fifty years, has been removed by death—

Resolved, That the medical profession has lost in this bereavement one of its great men—one who was pre-eminent as a practitioner, especially in the department of surgery, in the acuteness, accuracy and breadth of his observations, and in the judiciousness of his practice; who, as a counsellor in cases of difficulty, held a position seldom attained by any one; and who as an instructor for over half a century, by his luminous, impressive and honest teaching, moulded to no small extent the character of the medical profession in this country.

Resolved, That while we thus pay our tribute to the extraordinary talents and attainments of Dr. Knight, we would place far above these, in our estimate of him, those moral and religious qualities of his character, which so enthroned him in the affections of his medical brethren, made him welcome as counsellor and friend, and imparted a genial radiance to his uniform influence in favor of all that is honorable and good; and we would recognize the call which his example makes to us who remain, to keep in view the noble aims that were ever before him, and to cherish the Christian faith and hope which animated and sustained him through life, and in the last trying hour.

C. W. SHEFFRY, M.D., *Clerk.*

SPECIAL ORDER NO. 137. { KNIGHT U. S. A. GENERAL HOSPITAL,
New Haven, Conn., Aug. 26, 1864.

JONATHAN KNIGHT, M.D. (from whom this Hospital was named by Special Order of the Surgeon-General U.S.A.), departed this life on the 25th inst.

In addition to his exalted reputation as a physician and surgeon, Dr. Knight stood pre-eminent for urbanity of manners, genial social qualities, and that great moral excellence which adorns the Christian gentleman. He has left behind a character worthy the emulation of his brethren in the profession.

As a tribute to his memory the officers of this Hospital will attend his funeral in a body, and wear the usual badge of mourning for thirty days.

The flag will be displayed at half-mast until Sunday evening, the 28th inst.

By order P. A. Jewett,
Surgeon U.S. V. in charge.

Official:
Jas. P. Stearns, Lieut. V.R.C., Military Assistant.

At a late meeting of the Corporation of Yale College, Francis Bacon, M.D., was elected to fill the place made vacant by the resignation of Dr. Knight. Dr. B. is now Hospital Surgeon of the United States at New Orleans.—The degree of M.D. was conferred upon 17 graduates in the Medical Department.

A medical association has been organized in Middletown, Butler Co., Ohio, under the name of the "Miami Drake Medical Society." The constitution and code of ethics have been printed, together with a fee-table, with rates of charges conforming to the state of the times.

Plans and estimates are being prepared for the erection of an Eye and Ear Infirmary at Chicago, for the use of the Medical Department of the U. S. Army.

Dr. A. W. Smith, the present surgeon of the New Orleans Charity Hospital, has lately performed the operation of ligature of the innominata, for aneurism, and, for the first time it is believed, with entire success. It was done at the suggestion of Dr. D. L. Rogers, of New York, who was in New Orleans at the time, and who, once a pupil of Dr. Valentine Mott, was aware of the nearly successful result of that operation by Dr. M. more than forty years ago.

At Pekin, China, a hospital was opened a little more than two years ago, by W. J. Lockhart, M.D., F.R.C.S.E., a missionary of the London Society. No less than 32,000 individuals have applied for advice, embracing all classes of people, from the highest rank of officers to the beggars from the streets, and including large numbers of ladies and respectable women.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, August 27th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	68	53	121
Ave. mortality of corresponding weeks for ten years, 1853—1863,	56.0	52.4	108.4
Average corrected to increased population - - - -	00	00	119.2
Death of persons above 90 - - - - - - -	0	0	0

Communications Received.—Improper Treatment of Wounds in some of the U. S. Hospitals.

Died,—In Boston, Jenks Otis, Surgeon U.S.N., aged 34.—In New Haven, Conn., Aug. 25th, Dr. Jonathan Knight, aged 75.—In Cumberland Hospital, Tenn., July 25th, of typhoid fever, Edward D. Hubbard, Medical Cadet U.S.A., aged 22, son of Dr. D. H. Hubbard, of Clinton, Conn.

Deaths in Boston for the week ending Saturday noon, Aug. 27th, 121. Males, 68—Females, 53.—Abscess (of the prostate gland), 1—accident, 2—apoplexy, 2—asthma, 1—disease of the brain, 3—bronchitis, 3—cancer, 4—cholera infantum, 23—consumption, 11—convulsions, 3—croup, 1—debility, 2—diarrhœa, 5—diphtheria, 1—dropsy, 1—dropsy of the brain, 6—dysentery, 10—erysipelas, 1—scarlet fever, 2—typhoid fever, 4—gangrene, 2—homicide, 1—infantile disease, 2—intemperance, 1—disease of the kidneys, 1—disease of the liver, 2—inflammation of the lungs, 1—marasmus, 6—old age, 1—paralysis, 2—premature birth, 1—puerperal disease, 1—smallpox, 3—sore throat, 1—stone in the bladder, 1—syphilis, 1—thrush, 1—unknown, 1—whooping cough, 6.

Under 5 years of age, 72—between 5 and 20 years, 10—between 20 and 40 years, 15—between 40 and 60 years, 8—above 60 years, 16. Born in the United States, 87—Ireland, 22—other places, 12.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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EMPYEMA OF THORAX, RELIEVED BY PARACENTESIS.

[Read before the Middlesex East District Medical Society, July 20th, 1864, and communicated for the Boston Medical and Surgical Journal.]

By A. Chapin, M.D., Winchester.

March 9th, of the present year, I was sent for to see E. M., a boy four years old, suffering with severe pain in his abdomen and great restlessness. After a day or two, the symptoms, at first obscure, became more distinct. The restlessness and febrile action had increased, also the pain, which had become violent and was located in the right superior iliac region. The legs were habitually drawn up; constipation was persistent from the first, and unrelieved by accumulated cathartics and injections; the respiration restrained and with a catch, dry and puerile. At the end of five days, under the use of leeches, fomentations, mercurials, opiates, &c., the tenderness and obstruction had given way, and I left him on the fifteenth, sitting up and comfortable. The disease I had diagnosticated perityphlitis.

March 17th, two days later, I was again called, and found him covered with a rubeolous eruption on his face, neck and arms, great febrile action and restlessness; catarrhal symptoms—a cough, watery eyes and running at the nose; the respiration spasmodic and frequent, and a mucous râle in the right lung. The measles did not come out well, and soon disappeared, but the symptoms diminished in violence, and the boy became more comfortable and seemed improving, so that I intermitted my visits. Still the respiration continued oppressed, and exacerbation of symptoms re-appeared. A dulness on percussion showed itself, which soon extended over the whole right thorax; the respiratory sounds disappeared, and the febrile reaction became excessive—the pulse rising as high as 165.

April 3d, twenty-four days from the first attack and seventeen from the disappearance of the measles, his condition had assumed serious gravity. The right thorax measured two inches larger than the left; dull percussion extended over its whole surface; respiratory sounds were absent; respiration became abdominal; the impulses of the heart were distinct under the left arm, it being pressed far into the left thorax; the head elevated; posture on the left side; pulse 128; respiration 90, spasmodic.

Dr. E. Cutter having been called to my aid, and concurring in the diagnosis that fluid filled the right thorax, with the use of Wyman's apparatus for thoracentesis he drew away twenty ounces of purulent matter. Breathing at once became steady and easy. On the next day he was found quiet, having had a tolerably comfortable night, but was sore and unwilling to be moved. For a few days he seemed to gain; his urine, which was highly lateritious, became clearer; the general œdematous effusion which pervaded him subsided, his appetite became good, and his whole appearance improved.

April 10th, seven days from the operation of paracentesis, his symptoms having recurred unfavorably, much as before, Dr. Cutter was again sent for, who introduced the trocar under the right scapula between the ninth and tenth ribs, and with the aid of Wyman's pump drew off nineteen ounces more of pus, followed by the same relief as before. The next day I found that, under the influence of Dover's powder, he had slept well, his breathing was easy, and his aspect comfortable. He continued gaining slowly for more than a week, when his symptoms became less favorable. Dr. Cutter again met me on the 21st, eleven days from the last operation. Respiration was then distinct on the right of the spine, and was less frequent; percussion nearly normal in the superior portion of the thorax; pulse 120; appetite poor; countenance pallid; much prostration; symptoms of pyohæmia. It was concluded not to operate again, as a pointing was found at the point where the trocar had entered. On the 24th, two weeks from the last operation, I opened the prominence with a lancet. Pus flowed freely, and the boy again improved slowly. A few days after, the mother informed me that wishing to do all that could be done for her boy, she had called a homœopathist, who would in future see to him; and so he passed from my care!

The child, as I learned yesterday, has varied much in its aspects and prospects the past three months since I lost the charge of it. The orifice continued to discharge, at one time closing and then reopening, till a few weeks since, when it effectually closed and so continues. He now has an improved aspect in his countenance, breathes freely, but with an occasional catch, respiration is distinct under the right arm, lies on either side, sleeps and eats well, walks about out of doors, and seems to carry the aspect of recovery.

[Note.—Dr. Cutter reported the case of a man 50 years of age, a shoemaker, sick two weeks—effusion into right thorax—dulness on percussion, absence of respiratory murmur, no ægophony, immobility during respiratory act, fulness of intercostal spaces, no vocal fremitus. He drew off by a puncture, just below the lowest angle of the scapula, seventy fluid ounces of serum on March 4th, 1864. Iodide of potassium, with cream of tartar and pumpkin seeds, internally, and iodine externally, completed the cure, which, as far as it is possible to discover, has been perfect and permanent.—SEC.]

POST-MORTEM EXAMINATIONS

OF CASES REPORTED ON THE MONTHLY REPORT OF SICK AND WOUNDED AT BASE HOSPITAL, 18TH ARMY CORPS, FOR MONTH OF JULY, 1864.

[Communicated to the Surgeon-General of Massachusetts by C. E. MUNN, Asst. Surg. of 27th Mass. Vols. and Executive Officer Base Hospital.]

CASE I.—Henry Williams, Co. D, 1st Conn. Heavy Artillery, was admitted to hospital July 1st, for a gun-shot wound of the chest, received the day previous. Ball entered below the right clavicle, an inch and a half from the sternum, and passed out through the left scapula near the middle of the inferior edge. Wound had been hermetically sealed by Dr. Howard, at the field hospital. Patient had since been under his care, and his peculiar method of treatment fully adopted. He died July 7th.

Post mortem made ten hours after death, by Dr. Wendell, N. H.; Drs. Munn and Emery, Mass., and Storrs, Conn., also present.

External Examination.—Chest well formed; wound in front; the appearance of being closed by metallic sutures a few hours before death; the wound of exit closed by adhesive straps and collodion. Two small wounds made by tapping on the right side were dressed in the same manner. The attendants report the first, made on the 3d inst., was between the sixth and seventh ribs, two inches back of nipple; the other made fourteen hours before death, between the fifth and sixth ribs. Percussion was *resonant* on the *right side.* On the left, somewhat dull.

Internal Examination.—The ball was found to have passed through the external and upper part of the sternum, entering the pleural cavity at the junction of the first rib, thence through the upper lobe of the left lung outward, backwards, leaving the cavity three inches from the spine between the third and fourth ribs, and opening externally through the scapula as above stated. The lung on the *right* side was uninjured, and healthy in appearance, except somewhat more than usual *post-mortem* congestion in the posterior portion. Left lung congested throughout, and firmly adhered to the walls of the chest. Through the upper lobe was the suppurative track of the ball. No fluid was found on the *right side.* Five ounces of pus was found on the left, close upon the diaphragm, having a connection with the upper part of the lung. There was a small quantity of serum in other parts of the side. The two wounds from tapping were traced through the walls of the chest, into and through the *diaphragm,* into the *liver.*

Remarks.—First, hermetically closing the wounds did not, in this case, prevent the formation of pus. Second, paracentesis thoracis of the left side, the side containing the pus and serum, could not have reached the fluid without endangering the lung and other organs. Third, the operation performed on the right, or wrong side, was an error in diagnosis, proved by the failure to obtain fluid, and by the *post mortem* presenting a healthy condition of the parts, and was a greater error in puncturing so important an organ as the liver. Testimony of those watching the case is, that the patient—up to that time doing well—soon began to fail.

CASE II.—G. W. Ryerson, Co. F, 9th Me. Vols. Gun-shot wound of left side. External examination showed the chest full and resonant; no difference perceptible on either side; no more than the usual amount of dulness as the spine or dorsal region was approached. A penetrating wound was seen passing through the tegument between the eighth and ninth ribs, midway between the sternum and spine, fracturing the ninth, from which the omentum was protruding nearly one inch. Between the sixth and seventh ribs, and nearly two inches anterior to a line drawn from axilla to trochanter, was a punctured wound entering the cavity of the thorax.

On opening the thoracic cavity, the lungs were found uninjured. Slight adhesion had taken place above the point of puncture, and a penetrating wound through the diaphragm nearly one inch distant from its attachment to the ribs, directly underneath the seat of fracture in the rib. On opening the abdomen, the intestines were found to be intact; the liver extending three inches to the left of the median line; the left kidney torn from its seat and nearly reduced to a pulpy mass; the ball passing onwards, downwards, inwards and backwards until it rested beneath the psoas muscle just below the crest of the ilium, one and one fourth inches to the left of the last lumbar vertebra.

The examination was well and skilfully performed by Drs. Wilkins and Harris, four hours after death, and was extremely satisfactory, as it proved that the walls of the chest can be punctured—even where there is no fluid in the cavity—without injury to the lung, and that hernia of the omentum may be taken for hernia of the lung.

All of which is respectfully submitted.

(Signed) C. H. CARPENTER, *Surg.* 148*th N. Y.*,
July 10*th*, 1864. *Reporter for Surg. in charge.*

CASE III.—James Applegate, Co. F, 13th Ind. Vols. Wound—musket ball; chest; June 30th, 1864. Died July 12th, at six o'clock, A.M.

External Examination.—Chest dull, whole left thoracic region. Right chest resonant. Ball entered, fracturing tenth rib, one third length of rib distant from spine. Exit—from left lumbar space, two inches from vertebra.

Internal Examination.—Upon passing the knife through the cartilages, bloody serum rushed out, with much force. The sternum being elevated, a septum formed of false membrane was found, in which the serum had been retained. The heart was found displaced, by this, to the right of sternum. This septum must have contained about twenty ounces of fluid. Other similar septa were found between lobes, and between lung and walls of chest; whole amount of fluid judged to be about forty-eight ounces. Lung found adherent throughout its entire surface. No lesions of right lung were discovered.

Track of ball.—Ball entered, fracturing tenth rib as above stated, ploughed through lower lobe of lung, passed through diaphragm, striking lumbar vertebra, and passed out at left lumbar space.

Remarks.—The forming of septa was evidently an effort of nature towards a cure. *Post mortem* by Surgeon Carpenter. Present, Surgeon Storrs.

Case IV.—James Sayton, 22d U. S. Colored, Co. D. Died suddenly—examined sixteen hours after death. Rigor mortis complete. Thorax resonant, abdomen tympanitic, muscular development fine; three to four ounces of serum in pericardium. On opening right auricle, a fibrinous body was found, adherent to the walls of the auricle, and extending through the auriculo-ventricular valve into the right ventricle, was still adherent to walls of cavity by minute columnæ. The end of the mass lay in the pulmonary artery loosely.

(Signed) C. E. Munn, *Asst. Surg. 27th Mass. Vols.*

Base Hospital, 18th Army Corps, July 19th, 1864.

Case V.—*Post-mortem* examination made by Surgeon Storrs, July 21st, 1864, upon the body of Daniel Jackson, Co. K, 5th U. S. Colored Troops, soon after death from disease (dysentery). Upon opening the abdomen, some inflammation of the peritoneum was noticed. The cœcum, colon, and three feet of ileum were inflamed. No ulceration was discovered, but the mucous membrane in the region of the cœcum, about twelve inches either way, was found congested and thickened. About twelve inches of the rectum was also much inflamed. The mesenteric glands and the glands of the colon were somewhat enlarged.

(Signed) Asst. Surg. D. A. Wendell,

Base Hospital, 18th Army Corps, July 29th, 1864. *Recorder.*

Case VI.—James Hagan, private, Co. G, 76th Regt. Penn. Vols., wounded July 17th, 1864. Admitted into Ward 4, July 20th, 1864. A bullet had passed obliquely through the lower third of right thigh, from without inwards. The inner opening had been enlarged by a vertical incision to the length of about three inches.

Upon the 22d inst. hæmorrhage set in, but ceased after about fifteen minutes' pressure by the tourniquet upon the artery above. The loss of blood was not far from four ounces. The patient was then put to bed, and the nurse instructed how to make pressure upon the femoral artery in case hæmorrhage again commenced. About an hour after, the blood began to flow, and pressure was again applied a short time, with the same result as before. A tourniquet was then placed upon the thigh, and gentle pressure maintained until about four o'clock the following morning, when hæmorrhage again ensued, and the tourniquet was tightened. Upon loosening the tourniquet after a short time, it was found that the bleeding would not cease, and at 9 o'clock, A.M., the patient was put upon the table, the incision opened, and the femoral artery near its lower extremity found divided, with its venæ comites. The artery was ligated at its proximal extremity. The accompanying vein was also ligated at its proximal and distal ends. The loss of blood during the operation was not more than four ounces. The patient was then put upon the most nutritious diet, and the following prescriptions given:—℞. Spiritus vini gallici, ad libitum. ℞. Tinct. ferri. chloridi, gtt. xx., every six hours.

July 25th.—Gangrene ensued. Pulse small, 130 beats to the minute. Amputation was deemed inadvisable, owing to the low state of the patient.

July 26th.—Gangrene spreading. Disinfecting agents freely used; prescriptions and diet continued.

July 27th.—Patient died about 11 o'clock, A.M.

(Signed) D. A. Wendell, *Recorder,*
Asst. Surg. in charge of Ward 4.

PROF. FERGUSSON'S LECTURES ON THE PROGRESS OF ANATOMY AND SURGERY DURING THE PRESENT CENTURY.

Lecture VI.—On Excision of the Knee.

Mr. President and Gentlemen,—After the initiatory labors of those whose names I mentioned at the close of my last lecture, the operation of excision began to attract the notice of others, who took both a practical and theoretical review. In particular, Dr. Humphry of Cambridge, and Mr. Pemberton of Birmingham, drew attention to the fact—seemingly new to both—that after excision of the knee, in persons under full size, the limb did not grow in proportion to the other. Not only was the limb shortened by the length of the ends of bone removed, but actually, as was clearly pointed out in certain cases which were carefully watched, the limb all but ceased to grow, and was outstripped by its fellow some five or nine inches.

This is hardly the time or place to discuss the merits or questionable points of Dr. Humphry's ingenious and admirable papers on the growth of bones in their long axis at their epiphysial cartilages. I mean, therefore, to allude to them briefly. They seem to have been suggested chiefly, if not solely, by excision of the knee, and their main object appears to be that of pointing out generally that long bones grow in length entirely at the cartilage at the end of the bone next the epiphysis, and particularly that the femur grows in length chiefly at its lower end, where it joins or is joined by the epiphysis. The practical deduction from this is, that if, in resection of the knee in a growing subject, the epiphysis and epiphysial cartilages be cut away, the femur will not grow in proportion to the rest of the body; and hence a serious objection has been raised to the operation in young persons. This matter was first hinted at in Dr. Humphry's paper read before the Medical and Chirurgical Society in March, 1858, and was more elaborately worked out in subsequent papers laid before that Society in 1861 and 1862. The same author has alluded to the subject in his valuable "Treatise on the Human Skeleton," published in 1858, and he there comes to the conclusion that in such instances, when the tibia and femur might unite by ossific junction, "the objection urged against the operation might prove valid."

The union of physiology, science, and practice here has given great force to the observations of Dr. Humphry; but attention was still more prominently brought upon the subject by a remarkable paper published by Mr. Oliver Pemberton, of Birmingham, in 1859. The main object of this paper was to show that in a youth operated on for excision of the knee in 1854, the limb in 1859 was nine inches shorter than its fellow. Another analogous case is cited from the practice of Dr. Keith, of Aberdeen, where, in the course of "nearly six years, the deficiency of growth is measured by five inches." To add to this objectionable feature in Mr. Pemberton's case, there was no bony union; and in Dr. Keith's case, at the end of the time referred to "the union was not strong, and there was a bending outwards."

But the true parallel, the true value of excision of the knee has never yet been drawn to its full extent, in so far as I am aware. Life—life and comfort may be considered as the highest and best result of surgical interference in a case of incurable disease of the knee-joint. Even yet we have not sufficient data on those heads. My own impression is that the question of life between amputation and excision will be pretty nearly balanced; indeed, I shall venture a step further, and say that if excision were to get all the subsequent comparative advantages willingly given to amputation, the hazard of one operation would be less than that of the other. If I am not mistaken, an idea prevails that excision of the elbow is in reality a safer operation than amputation in the arm; but such is not mine. Few fatal cases of this excision have been recorded, but I have seen as many as to convince me that the mortality is probably as great as that of amputation above the elbow. Happily, such a result is rare in either instance.

Whatever the mode of amputation, it must be acknowledged that neither skill, forethought, manipulative perfection, nor after-treatment, whether local or constitutional, can invariably avert some of the evils (less than death) which are known from ample experience to follow such an operation. The occasional evils of secondary hæmorrhage, of unusual retraction, of scanty covering, of chronic sore therefrom, of caries or necrosis, of tender cicatrix, of neuroma on the great nerves, and of secondary operative interference, have all been in a manner ignored in this comparison. And yet how often have all men of experience seen cases of the kind. Neuroma is certainly rare in the lower limb; yet, allowing the most perfect result—allowing the stump to be above criticism, what is it after all? It is only a portion of thigh whereon to fix an artificial limb. If this cannot be done, the sufferer must ever after be dependent on crutch and stick.

I beg it to be observed that I do not bring these features forward as objections to amputation in the thigh in cases where the operation may be deemed absolutely necessary. If that dire proceeding must be, patients must take their chance. Surgery can never entirely avert the occasional necessity for amputation, but in the case for which I now speak I maintain that she frequently can. And now let us see the case of excision. The foot and leg are left; the limb is shortened positively by the length of bone taken away—say from two inches to four. Allowing for the loss of growth in length before operation, and for arrest of growth after the operation—say five inches, say nine inches; allowing even more, the lower end of the thigh, the leg, ankle, and foot still remain. It is worthless in surgery to compare a bad stump with a bad lower limb after excision. Take the perfection of a stump, even in the estimation of the most critical, and with even a medium limb after excision, and the comparison will not stand for an instant. With the best results, it seems absolutely absurd to compare the two.

In the general comparisons hitherto made I take leave to set aside the evils of excision, as drawn or indicated by the authorities already named, as exceptions to the rule, and as being equalled in evil in most respects by those following amputation; but I say unhesitatingly that if the comparison is drawn between the perfect stump and the perfect result of excision, the comparison is just as unreasonable as that between an artificial limb and one of flesh and blood.

Inequality in the length of the upper extremities is of little moment, but it is awkward, to say the least of it, in the lower, as we frequently observe after fractures and after disease of the hip or knee in early life. Such inequality may, in some instances, be attributed to bad treatment, but it often occurs despite the best skill in surgery. Yet who would in such a result say that the patient would have been better with the limb away by amputation? Who does not think that when a person gets well of a diseased knee or hip, with shortening even to the extent of five or nine inches—no uncommon result—he is yet somewhat fortunate—fortunate in not having had amputation performed on his thigh. We do see occasionally cases of great distortion of the lower limbs after disease of the knee, but even these patients sometimes congratulate themselves on having the leg and foot. In some few such cases amputation in the thigh has actually been performed years after the so-called cure. Yet in such cases it is not our custom to lay blame on the treatment which may have been adopted, although I believe that it has often been highly defective. Whatever the amount of distortion after the cessation of disease in the knee-joint, I hold that, excepting very special cases, amputation is unjustifiable, as resection of the distorted knee is both safer and better. But I shall not press this point at present; let me rather again draw attention to the fact, that we never cry out against either nature or the surgeon in cases of shortening and distortion of limbs after disease. Yet such defects are common. Whilst meditating these remarks, I have rarely known a day pass in taking one's ordinary rounds that I have not observed persons walking in the streets with shortened and distorted limbs after disease of the knee. Most of them have moved more nimbly, and with greater apparent security and comfort, than if on the artificial limb after amputation of the thigh. Yet shortening has in a manner become the bugbear of excision of the knee. I admit that it is a defect, but abstraction or excision and arrest of development are evils elsewhere as well as here. Again, I admit that in this locality disparity of size, particularly in length, is an awkward circumstance. Let us see, however, in what this consists? A difference of three, five, or nine inches! What is the contrast which has been drawn with this defective limb? It is with its neighbor! And here I imagine we hit upon the weakest of all the objections hitherto made to excision of the knee. The risk of loss of life, distortion, uselessness of that which is preserved, are all serious objections or blemishes to this proceeding. A short leg to a long one is, I again admit, a defect; but in this respect surgery no more fails than Nature does after disease. What, I ask, is the alternative for excision of the knee proposed by those who object to this operation? It is amputation in the thigh! I cannot allow that which might be an easy answer to the question—Why perform an operation at all? Why not cure the disease, and thereby avoid amputation? That is a question of a totally different kind. I am not now discussing the question of amputation, or continued, and possibly other treatment to save the limb. It is the question between excision and amputation as regards the future condition of the limb. In ordinary amputation under such cases, half the thigh, or possibly two thirds, may be left. The body is mutilated to nearly the entire extent of one extremity. Say what you may as to the quality of the stump, there is left a shortened femur, a shrivelled thigh; emphatically a stump.

Even Samuel Johnson's explanation of the term gives an exalted idea of the noun substantive which scarcely holds good with us:—"The part of any solid body remaining after the rest is taken away," is a flattering description of one of our stumps of the thigh. It is in reality with us barely more than a peg whereon to hang an artificial limb. In youth, in middle age, in advanced years, it never improves. It never can be more than a shortened bone, with shortened and shrivelled materials around; and this even with the perfection of a stump. The defective results of excision I am disposed, in accordance with what I have said before, to class with defective stumps. In justice to the subject I now deal with, I take a fairly perfect result of excision. Whatever the shortness, that may readily be made up by a high-soled boot or shoe. There are left the lower end of the thigh, nearly the whole of the leg, the ankle and foot; the former two slightly damaged, the latter unscathed. The foot, leg and thigh do as much in the cases of distortion or shortening after disease; and who, under such circumstances, would compare an artificial substitute to the limb of life?

But I cannot leave the argument here. A well-healed stump never in reality improves, unless, possibly, it gets more callous, whilst often it gets more tender and irritable; but the seeming perfect result of excision at the end of six or twelve months (just when stumps are generally at the best) is no criterion of true perfection. If the limb is properly managed afterwards, it goes on improving for months—aye, for years. Without again discussing the question as to length, and without applying the remark to all, I can affirm, from ample experience in my own practice, that thigh, leg, and foot enlarge in bulk; and, in particular, that with this change the leg and foot improve in muscular energy. It may to some be more impressive when I say that the calf of the leg shows again in increased muscularity and vigor. This observation has never yet, I believe, been dwelt upon by those who have written of the good qualities of limbs after excision; but it is an important fact, and one which, in my opinion, goes far to balance that of shortening, which has been so eagerly put forward by writers previously referred to.

I do not think that the value of the human foot has been sufficiently estimated by those who amputate, or even by some who advocate excision. It is certainly as wonderful in its mechanism, if not more so, as any of the organs of special sense; and, without drawing a useless comparison between it and the hand, it is certainly in its entire state a thousand times more perfect, as part of the future support of the body, than the point of a thin stick, or any fabricated imitation of a foot. We see persons walking about with limbs shortened from various causes; some with high-soled boots, some with apparatus of iron, some with a pin of wood to make up the proper length, each with a foot of tolerable dimensions and vigor. Whatever we may say to grace or symmetry in these cases, we yet, under ordinary circumstances, consider that a fair compromise has been made with formidable disease. Even as an unfortunate maimed one who has suffered amputation in the thigh halts along, we may pity him as the victim of incurable disease, yet we claim his case as a bright illustration of the power of surgery. The foot is rarely thought of, whether it has been swept away by amputation, or it be a portion of a shortened distorted limb. Yet I doubt if there is any substitute at all to be compared with it.

Time will not permit me to draw extended comparisons and to illustrate the value of the foot. The sketch here exhibited shows a representation of Cæsar Ducornet, who was born without hands or arms, and with defective feet, having only four toes on each, yet he became a famous historical painter, and with his toes wielded the brush more perfectly and to greater purpose than most of his contemporaries. But for a forcible example, I beg attention to the figure and skeleton of Hervio Nano, or Harvey Leach, in the Museum of University College. The latter shows the bones of the head, chest, and upper extremities of remarkable development. The pelvis is comparatively weak, and the femur in each limb is scarcely, perhaps not, to be recognized. The right tibia and foot are very defective, but the left leg and foot are better developed, although far from being in due proportion to the trunk above. Although the feet are defective, particularly the right one, I call special notice to the fact that they were in life possessed of most wonderful energy and agility. Leach was one of the most remarkable gymnasts of his day. Notwithstanding the distortion of his lower limbs, he had marvellous power in his feet. As an arena horseman he was scarcely excelled, whether in sitting or standing. He walked and even ran fairly, and his powers of leaping, partly from his hands, partly from his feet, were unusual; yet his lower limbs were so short that, as he stood erect on the floor, he could touch it with his fingers. This man earned his livelihood as much by the energy of his lower limbs as of his upper, yet, as you perceive by the skeleton, that energy must have been almost wholly in the feet. The length of the lower limbs on the skeleton is, from hip to heel on the right side, nine inches, and between the same points on the left about sixteen inches, showing a disparity of seven inches between the two. I deem it particularly worthy of remark that the femur seems to be entirely wanting on both sides—a fact of peculiar interest to me, as I have dealt so freely with the bone at both its extremities. On the left side there are only three bits of bone, making about two inches in length; and on the right there is only one portion, about the size of a chestnut. It may be observed, that whilst the tibia on the left side seems nearly normal in proportion to the rest of the skeleton, the right is three inches shorter, and more like an os innominatum than a human tibia. Yet, with all these defects and peculiarities, the energies of the possessor were remarkable. His power in these limbs was chiefly in the feet. Without these members he would have been incapable of those efforts which struck thousands with amazement; but if one of his feet had been wanting he could not possibly have done what he did. One foot added to the vigor of the other, and each was in that degree of perfection as to enable its master to do such things as people with limbs of ordinary mould usually dare not attempt. Surely he will be a sceptic indeed who does not allow that in this instance the foot was the grand feature in the lower limbs; and my object in bringing the illustration forward on such an occasion as this is to show the importance of this organ in regard to its function of bearing the weight of the body above. Look at those who walk with limbs distorted and shortened from former diseased knee or hip, who bear upon a support three, six, nine, or twelve inches long—and get on well, too—and think what their powers of progression might be if without the foot! No doubt some with stumps in the thigh have walked marvellously well: I have known one in this predicament walk ninety miles in three consecutive days; but these are exceptions to the rule, and they present the very best examples of stumps.

The object of these remarks is to draw attention to the value of the foot, whether it comes directly in contact with the ground or is the point of attachment for something to make up the proper length of limb on that side. In an anchylosed knee the foot is of great importance in progression. Besides the mechanical construction of the foot, its comparative size is of enormous value as a support; and what tissue of a stump in the thigh can compare with that of the sole and heel of the perfect foot?

But I feel almost ashamed to carry this argument further. Persons out of our profession would think it strange to hear an argument in the College of Surgeons to show that the possession of a healthy foot is better than the absence of a foot; that a foot, leg, and lower third of the thigh, all free from disease, are better than nine inches only of a shrivelled thigh; that a nearly whole limb, two feet or two feet and a half long, is better than a shortened and shrivelled thigh which measures some nine or twelve inches from the hip! Yet such is the seeming argument to which I have been forced, for those who have opposed the operation of excision of the knee have almost invariably represented a good stump, as it is called, as superior to any limb preserved by such a proceeding. My own impression, however, is very different. I cannot say of a single instance coming under my own observation, that amputation would have been better. I am not here to say that excision must invariably be superior to amputation; but this I will say without hesitation, that however short the limb may be after this operation, the parts preserved, provided the original disease is cured and no special or great distortion be left, must be beyond measure superior to the best stump that can be made. I care not whether the limb may be five or nine inches shorter than the other, my impression is that were the femur so much diminished in length by cutting and by want of development that the foot on the damaged side should actually be above the level of the sound knee, its presence would insure a better support than a stump of the thigh. I thus admit and take what may be considered an extreme case, such as has never yet been brought forward, and such as is likely to occur rarely if ever. I do so to meet the exigencies raised by Messrs. Pemberton and Humphry, and particularly to meet the all-important question as to the propriety of performing this operation on young persons in whom the bones have not attained their full length. The reasoning—if such it may be called—on this question has been remarkable. It amounts to this: that as the limb does not grow after this operation in young persons in proportion to the rest of the body, particularly in proportion to the other limb, it should not be performed; for this want of growth, great or small, is an insurmountable objection. Yet, as I have shown, the shortening is likely to be as great after a tedious recovery extending over years from disease of the knee in early life. For example, look at this leg and foot, and compare them with the other (referring to a cast). These shrivelled parts are the result of disease. But that is, indeed, a favorable acceptation of this objection; and, to say the truth, it is not the view taken by those to whom I refer, nor is it a view which I myself admit for a moment. The question is not in such cases between excision and the cure of disease; it is between excision and amputation. I take it for granted that, with few exceptions—some of which I shall allude to ere long—excision has been performed only in instances where amputation would otherwise have been the operation—instances where further attempts at cure were deemed likely to be useless.

That amputation, under such circumstances, has been a common practice—in fact, the rule of practice—every one who remembers what surgery was thirty years ago must admit. Now, it is in such cases that some opponents of excision of the knee have said that it cannot be done, that it must not be, because the limb does not grow afterwards, or because it grows shorter! Mr. Edwards and others have shown that the limb does grow in length after the operation. I can testify the same from my own personal experience. I admit that in some cases it may be less than in others; but I maintain that, however little, the preserved part of the limb must always be better than none. The leg and foot must always be better than any artificial substitute. The case related by Mr. Pemberton, on which so much stress has been put, and which, in as far as I can perceive, has been held as the grand bugbear against this operation, was by himself and colleagues condemned to amputation. With wise consideration, however, in my opinion, he selected excision. Without following all the interesting particulars of this case, I deem it sufficient for my present purpose to give Mr. Pemberton's own description and figure of the state of the limb some six years afterwards:—"About the excised joint the parts were sound, and free from pain on manipulation, a very movable ligamentous or fibrous medium connecting the articular extremities. Notwithstanding the shortness and the flail-like joint, it was astonishing to see the power he possessed of extending the leg, and of bearing the entire weight of the body on it in walking, unaided by support of any kind; and it was quite clear that the disparity in length alone prevented him from realizing all the advantages that he might under other circumstances have obtained from the operation. With all these drawbacks, he works hard as a boat-builder, the limb being aided by a cork sole of some six or seven inches in height, and by a leather case at the knee."

No one would presume to call this limb equal to one untouched and from the hand of Nature; but my own impression is that it is better than the best ever fabricated by the hand of man. There is no accounting for taste or even opinion, however, and here is what Mr. Pemberton thinks:—"The limb cannot be deemed otherwise than an incumbrance, and with the best appliances to remedy the want of length, proving, after all, little better than a sad deformity." Now, the alternative in this instance was a stump with a crutch or an artificial appendage! It may be a matter of taste amongst the victims of disease, and even amongst ourselves, which would be best. My own choice is strongly in favor of flesh and blood.

The features of hæmorrhage and of shock in this operation I think scarcely worth notice on such an occasion as this. In some few cases there has been trouble from oozings for hours after, and an articular artery has now and then given trouble. In one case I have seen severe shock in a weak child; but under any circumstances I deem these matters of less magnitude than in amputation in the thigh. The main artery of the limb is untouched, and the worst form of secondary hæmorrhage can never occur.

The want of bony anchylosis has been much referred to as a serious objection. I certainly think it best when it occurs, and it rarely does not if time be allowed. But even without it the results may be entirely satisfactory. You have heard what Mr. Pemberton thinks on the subject in his famous case. I think it but right to say that one of the best I have had was where bony union did not occur; and I have seen a person on whom Mr. Partridge operated, under very disadvantageous circumstances, who nevertheless made a good recovery, and who, without anchylosis, can carry a sack of flour on his shoulders weighing two hundred and eighty pounds, and can do readily the ordinary work of a journeyman baker.

In my own early aspirations regarding this operation, I always kept amputation in reserve as the last resource, either at the time of excision, or weeks or months afterwards; but my views in this respect have been considerably modified. I prepared myself to meet with failures at every stage; and then, as I thought, the patient, if not slain outright, could but submit to amputation. Such a view as this was extensively acted upon by Dr. Humphry, for of thirteen cases amputation was performed in four instances, happily all recovering. But I have since altered my opinion considerably on this point, and now look upon amputation as a step rarely to be anticipated in such cases. I can conceive it possible that a seeming necessity might arise at the moment of excision to resort to amputation: I have taken this step twice myself. But in instances where all does not go on well afterwards, instead of taking fright or losing heart at an early period, I ask for time; and when that does not suffice, I believe dealing freely with the wound, opening sinuses, clearing away strumous effete material, picking away loose necrosed pieces of bone, gouging away bare material of the kind—aye, even opening up the whole surfaces, and sawing off fresh pieces of bone—to be better than amputation. To do all this, particularly to repeat excision—to perform resection, as it may with propriety be called—seems an admission of failure; but it is no more so than having to repeat an original amputation of the thigh, as has frequently been done. The results are or may be very different, however, for there is still the limb left to compare with the abbreviated stump.

There is more, however, in these words than may appear; for I do not speak from theory, but from actual experience. In October, 1862, Jane Bolton came under my care in King's College Hospital to have her limb removed, after unsuccessful excision of the knee. There was no ossific union, and a considerable portion of the lower end of the femur protruded through a large opening in front of what remained of the original knee. Bearing in mind what I had occasionally done in cases of unsatisfactory results of excision at the elbow, I opened-up the parts, took away the projecting portion of bone, trimmed here and there, and ultimately succeeded in getting a sound cicatrix, a perfect anchylosis, and a limb so strong that, although shorter than its fellow by several inches, the patient was delighted with it; yet when she came to town, and for months even after the second conservative operation, she was anxious that amputation should be performed. I have since repeated similar operations with the most satisfactory results, and as a general practice I decidedly recommend it in preference to amputation, as the secondary alternative.

In many instances of so-called cure of disease of the knee the limb is left shortened, bent, flaccid, useless; and the body is borne on a crutch. In all such cases, when the usual modern means of extension have proved of no avail, surgery has heretofore held out no alternative between a crutch and amputation. When patients are discontented—where amputation has often been requested and frequently performed, to give riddance from a useless member—I can testify by experience to the excellent results of excision. By removal of the stiffened or anchylosed articular end of the bones the limb has been stretched; a treatment like that for compound fracture has been adopted; union, new anchylosis, has taken place, with the limb in a proper line; and a comparatively useful member has been the result. This proceeding emanated from excision under the ordinary circumstances of disease. It was a bolder idea than that of Barton, who recommended that a wedge-shaped piece of the head of the tibia should be removed in certain cases of bending and anchylosis after disease of the knee; and it was carried out for the first time, I believe, by Mr. Price, whose enthusiasm was equal to if not greater than my own in regard to all pertaining to this operation. The patient unfortunately died, from inflammation in the chest, induced possibly—probably—by the operation; but I have had repeated experience since to prove that such a proceeding is preferable to the so-called "complaisant" or "expedient" operation of amputation, where a person is tired of carrying about a useless appendage, of no value to the holder and of no credit to the art or science of surgery. Here is a fair example of the kind. A lad carried a limb bent at right angles and walked laboriously on a crutch. Excision was performed. Things did not go on so well as I expected. Twice afterwards I had to renew the incision, and saw fresh surfaces on the bones. About twelve months afterwards he left the hospital, with a loose dangling leg. But by-and-by anchylosis set in, and here is the preserved limb. It certainly cannot stand comparison with the other limb, but as a proof of its vigor, the youth recently walked twelve miles to see the Derby run. In a race himself he would no doubt be an "outsider"—worse than "dark;" but the leg is better, in my opinion, than a crutch. Here is another example, which was treated in the same way, and a leg like this was the result of one operation.

But I have already dwelt longer on this subject than present time warrants, and the hour tells me that I must give up. There are still many matters associated with it which I should wish to refer to, and, possibly, I may take another opportunity to aid in bringing out all that I consider important with regard to the great surgical question to which I have directed attention in these two Lectures.

The question has now been so extensively and so variously handled by the different authorities whom I have quoted, that I cannot pretend to much novelty in my present dealing with it. If I estimate my own attempt rightly, it has been to show the superiority of a leg and foot of flesh and blood to any artificial substitute—of a foot and leg, whatsoever the shortening, whatever the "arrest of development," to a stump of a third, one-half, or even two-thirds of the length of the thigh.—*London Lancet.*

IN the summer of last year the corner-stone of a building to be known as the "Home for the Blind" was laid at Cape Palmas by Bishop Payne of the Protestant Episcopal Mission. A simple building of stone, 30 by 14 feet, one story high, with two small native buildings in the rear, is all that is at present undertaken.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, SEPTEMBER 8, 1864.

THE CASE OF SURGEON-GENERAL HAMMOND.—We printed last week the President's order confirming the sentence of the late Surgeon-General. We would willingly consign this terrible case of official delinquency to oblivion, but our readers must surely expect a fuller statement of the case than appears in the order referred to, which was all that our space allowed in our last number. We do not care, however, to expatiate upon the enormity of the offence of which Dr. Hammond has been convicted. We feel that a reproach has been brought on the whole profession, that a stigma is fixed on the nation itself by the corruption of so distinguished an official, appointed as he was at the instigation of some of our most worthy and influential citizens, and upheld to the very last by some of the most eminent names in the circle of science. We have found it very hard to believe in his guilt, and felt that the trial which he and his friends so zealously courted would result in a triumphant acquittal. The long delay between the dissolution of the court and the official announcement of the sentence, together with the knowledge that the President was making a thorough personal examination of the record, sustained us in the hope that there might be good grounds for setting aside an unfavorable verdict. The order of the President only makes it the more painfully certain that the evidence fully sustained the charges presented. Dr. Hammond has appealed to the public for a suspense of judgment, and we should only be too happy if he is able in any way to explain away the facts which now rest like a pall upon his reputation. We condense from the *Washington Chronicle* the following report of the Judge Advocate General, as it appears in the New York *Medical Times*.

"We present our readers this morning with the report of the Judge Advocate General in this remarkable case, which engrossed a court-martial for so many weeks. The following officers composed the court:—Major-General R. J. Oglesby, Vols., President; Brigadier-General W. S. Harney, U. S. Army; Brigadier-General W. J. Ketchum, U. S. Vols.; Brigadier-General G. S. Greene, U. S. Vols.; Brevet Brigadier-General W. W. Morris, Colonel 2d U. S. Artillery; Brigadier-General A. P. Howe, U. S. Vols.; Brigadier-General J. P. Slough, U. S. Vols.; Brigadier-General H. E. Paine, U. S. Vols.; Brigadier-General J. C. Starkweather, U. S. Vols.; Major John A. Bingham, Judge Advocate.

JUDGE ADVOCATE GENERAL'S OFFICE, May 17th, 1864.

To the Honorable, the Secretary of War:

"Brigadier-General William A. Hammond, Surgeon-General, United States Army, was tried upon charges of 'disorders and neglects, to the prejudice of good order and military discipline,' 'conduct unbecoming an officer and a gentleman,' and 'conduct prejudicial to good order and military discipline.'

"The specifications which set forth the statement of facts alleged, and found by the court to constitute these offences, are as follows .—

"CHARGE 1ST. 'Disorders and neglects, to the prejudice of good order and military discipline.'

"*Specification* 1*st*. 'In this: that he, Brigadier-General William A. Hammond, Surgeon-General, United States Army, wrongfully and unlawfully contracted for, and ordered Christopher C. Cox, as acting purveyor in Baltimore, to receive blankets of one William A. Stephens, of New York. This done at Washington city, on the seventeenth day of July, in the year of our Lord one thousand eight hundred and sixty-two.'

" *Specification* 2*d.* 'In this: that he, Brigadier-General William A. Hammond, Surgeon-General as aforesaid, did, on the thirtieth day of May, in the year of our Lord one thousand eight hundred and sixty-three, at Washington city, wrongfully and unlawfully prohibit Christopher C. Cox, as medical purveyor for the United States in Baltimore, from purchasing drugs for the army in said city of Baltimore.'

" *Specification* 3*d.* 'In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General, United States Army, did unlawfully order and cause one George E. Cooper, then medical purveyor for the United States, in the city of Philadelphia, to buy of one William A. Stephens blankets, for the use of the Government service, of inferior quality; he, the said Brigadier-General William A. Hammond, then well knowing that the blankets so ordered by him to be purchased as aforesaid were inferior in quality, and that said Purveyor Cooper had refused to buy the same of said Stephens. This done at Philadelphia, in the State of Pennsylvania, on the twenty-eighth day of May, in the year of our Lord one thousand eight hundred and sixty-two.'

" *Specification* 4*th.* 'In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General as aforesaid, on the fourteenth day of June, in the year of our Lord one thousand eight hundred and sixty-two, at the city of Washington, in the District of Columbia, unlawfully, and with intent to aid one William A. Stephens to defraud the Government of the United States, did, in writing, instruct George E. Cooper, then medical purveyor at Philadelphia, in substance as follows:—

" 'Sir:—You will please purchase of Mr. W. A. Stephens eight thousand pairs of blankets, of which the enclosed card is a sample. Mr. Stephens's address is box 2,500, New York. The blankets are five dollars per pair.'

" *Specification* 5*th.* 'In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General, United States Army, on the sixteenth day of June, in the year of our Lord one thousand eight hundred and sixty-two, at the city of Washington, did corruptly, and with intent to aid one William A. Stephens to defraud the Government of the United States, give to the said William A. Stephens an order, in writing, in substance as follows:—Turn over to George E. Cooper, medical purveyor at Philadelphia, eight thousand pairs of blankets; by means whereof the said Stephens induced said Cooper, on Government account, and at an exorbitant price, to receive of said blankets, which he had before refused to buy, seventy-six hundred and seventy-seven pairs, and for which the said Stephens received payment at Washington in the sum of about thirty-five thousand three hundred and fourteen dollars and twenty cents.'

" *Specification* 6*th.* 'In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General, United States Army, on the thirty-first day of July, in the year of our Lord eighteen hundred and sixty-two, at the city of Philadelphia, in the State of Pennsylvania, well knowing that John Wyeth and Brother had before that furnished medical supplies to the medical purveyor at Philadelphia, which were inferior in quality, deficient in quantity, and excessive in price, did corruptly, unlawfully, and with intent to aid the said John Wyeth and Brother to furnish additional large supplies to the Government of the United States, and thereby fraudulently to realize large gains thereon, then and there give to George E. Cooper, medical purveyor at Philadelphia, an order, in writing, in substance as follows:—

" 'You will at once fill up your store-houses, so as to have constantly on hand hospital supplies of all kinds for two hundred thousand men for six months. This supply I desire that you will not use without orders from me.'

"And then and there directed said purveyor to purchase a large amount thereof, to the value of about one hundred and seventy-three thousand dollars, of said John Wyeth and Brother.

" *Specification* 7*th.* 'In this: that he, the said Brigadier-General William A.

Hammond, Surgeon-General, United States Army, about the eighth day of October, in the year of our Lord eighteen hundred and sixty-two, at Washington city, in contempt of, and contrary to the provisions of the act entitled 'An act to reorganize and increase the efficiency of the medical department of the army,' approved April 16, 1862, did unlawfully direct Wyeth and Brother, of Philadelphia, to send forty thousand cans of their 'extract of beef' to various places, to wit: to Cincinnati, St. Louis, Cairo, New York, and Baltimore, and send the account to the Surgeon-General's office for payment.'

"CHARGE 2D. 'Conduct unbecoming an officer and a gentleman.'

"*Specification* 1*st*. 'In this, that he, Brigadier-General William A. Hammond, Surgeon-General, United States Army, on the thirteenth day of October, in the year of our Lord eighteen hundred and sixty-two, at Washington city, in a letter by him then and there addressed to Dr. George E. Cooper, declared in substance that the said Cooper had been relieved as medical purveyor in Philadelphia, because, among other reasons, 'Halleck,' meaning Major-General Henry W. Halleck, General-in-Chief, requested as a particular favor that Murray might be ordered to Philadelphia; which declaration so made by him, the said Brigadier-General William A. Hammond, Surgeon-General as aforesaid, was false.'

"An additional charge and specifications preferred against Brigadier-General William A. Hammond, Surgeon-General, United States Army:—

"CHARGE 3D. 'Conduct to the prejudice of good order and military discipline.'

"*Specification* 1*st*. 'In this: that he, the said Brigadier-General William A. Hammond, Surgeon-General, United States Army, on the eighth day of November, in the year of our Lord eighteen hundred and sixty-two, at Washington city, did unlawfully order Henry Johnson, then medical storekeeper and acting purveyor at Washington city, to purchase three thousand blankets of one J. P. Fisher, at the price of $5.90 per pair, and to be delivered to Surgeon G. E. Cooper, U. S. A., medical purveyor at Philadelphia.'

"A plea of not guilty was entered upon each of the charges and specifications, and after a full hearing of the testimony for the Government and the defence, and the examination of a large amount of documentary evidence, together with the consideration of the elaborate arguments of both sides, the court rendered a finding of guilty on all the charges, and sentenced the accused to be dismissed the service, and to be forever disqualified from holding any office of honor, profit, or trust, under the Government of the United States."

Want of space compels us to defer the remainder of the Report till next week.

MESSRS. EDITORS,—Permit me to use a few lines of your JOURNAL for a matter partly personal and partly pertaining to the Massachusetts Medical Society, and partly for the benefit of my professional brethren. First, then, on their behalf:—The faculty of observation I have always considered to be of the first importance to men of our profession, and I am sorry to see so many members of the Massachusetts Medical Society deficient in it. I have been an official of the Society for some thirteen years, during which time my name has of necessity been frequently in print in the various documents of the Society, besides not inoften as a contributor to your pages. It has but five letters in it, and yet my brother physicians in writing it make a mistake in one letter of it half the time, and mistake two letters of it in one case out of five. This surely does not display great power of observation on their part. I hope they can see through a case of phthisis or typhoid more easily than through a name of five letters. Then, for the honor of the Society:—Although it has been duly announced that I am no longer the Librarian but am Corresponding Secretary, my fellow members have not *observed* this, and every other day I get a letter from some one of them addressed to me as Librarian, and containing the usual complaints that they have not received their "publications"—the fault of which generally lies in their not having notified the Librarian of their having paid their dues. Lastly, for myself, I should rather be spared the necessity of correcting such blunders on the part of my professional brethren, which I hope can be done by asking them to *observe*—I am *not* Librarian of the Massachusetts Medical Society, *I am* Corresponding Secretary, and I spell my name

Boston, Aug. 26th, 1864. WM. E. COALE.

THE foundation-stone of St. Mark's Hospital was laid at Cape Palmas, in Africa, four years ago. A substantial stone building has since been erected, at a cost of about $5,500. The building is represented as beautifully situated, and the ward-rooms clean and comfortable. It is now open to the sick among the seamen, colonists and natives. It is under the management of the U. S. Protestant Episcopal missionaries, and is supported by voluntary contributions.

The first statue to the memory of John Hunter, the greatest physiologist England has produced, and to whom the medical profession and the public are indebted for the finest anatomical collection in Europe, and upon which the Council of the College of Surgeons has expended nearly £1,000,000 sterling, has just been placed in the Hunterian Museum.

A monument is about to be raised, near the Royal Victoria Hospital at Netley, to the memory of the medical officers—seventy in number—who lost their lives on service during the Crimean Campaign.

Dr. Livingstone, the distinguished African traveller, recently arrived in London.

Dr. Pliny Earle has been elected Superintendent of the State Lunatic Asylum at Northampton.

During last year 1270 cases of smallpox occurred in Berlin, with 223 deaths, or 17 per cent. The mortality in the vaccinated was 10 per cent.; in the unvaccinated, 42 per cent.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 3d, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	43	39	82
Ave. mortality of corresponding weeks for ten years, 1853—1863,	53.4	50.5	103.9
Average corrected to increased population - - - - -	00	00	115.1
Death of persons above 90 - - - - - - - - -	0	0	0

DIED,—In Somerville, 4th inst., Dr. John Odin.—William H. Heath, Surgeon 2d Mass Vols., formerly of Stoneham.

DEATHS IN BOSTON for the week ending Saturday noon, Sept. 3d, 82. Males, 43—Females, 39.—Accident, 2—albuminuria, 1—anæmia, 1—apoplexy, 1—congestion of the brain, 3—disease of the brain, 3—bronchitis, 1—cancer, 1—cholera infantum, 17—consumption, 11—convulsions, 1—croup, 3—cyanosis, 1—cynanche trachealis, 1—debility, 1—diarrhœa, 4—diphtheria, 1—dropsy, 1—dropsy of the brain, 2—drowned, 1—dysentery, 1—scarlet fever, 2—typhoid fever, 3—yellow fever, 1—infantile disease, 2—intemperance, 1—disease of the liver, 1—marasmus, 3—old age, 1—peritonitis, 1—smallpox, 1—stone in the bladder, 1—unknown, 4—whooping cough, 2.

Under 5 years of age, 44—between 5 and 20 years, 5—between 20 and 40 years, 16—between 40 and 60 years, 12—above 60 years, 5. Born in the United States, 60—Ireland, 18—other places, 4.

THE

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OZONE; ITS RELATIONS TO HEALTH AND DISEASE.

By E. S. Gaillard, M.D., of Baltimore, Md.—An Essay which received the Fiske Fund Premium.

[Communicated for the Boston Medical and Surgical Journal.]

This body, once unknown and long neglected, but now commanding the enthusiasm of all engaged in the investigation of its properties, is yet to form a most important chapter in every volume of medical literature. Emerging from the shades of an enshrouding obscurity, and rapidly becoming universally known, "*clarior e tenebris*" might not inaptly be cited as the brief but terse description of its previous history. When more patient and protracted analysis shall bring the sure reward of a still better comprehension, it will be prized as "the pillar of fire to give light" through the tedious wilderness of obscure and discouraging theory. But the nature of such a paper as the present forbids the indulgence of prediction, when the future alone can verify convictions which would induce the spirit of prophecy. With brevity and conciseness, therefore, we will, without preface, consider the subject contemplated.

It is now generally conceded that Van Marum was the first to call the attention of scientific men to the existence of some anomalous body, which farther investigations proved to be that of which we now write. This philosopher made his first experiments in 1785, but the results were too unsatisfactory to secure general attention. He had charge of the large electrical machine in Taylor's Museum, and with this he excited sparks in a tube filled with oxygen; after the disengagement of 5,000 sparks, the gas had acquired a very strong and characteristic odor. M. Schönbein, of Bâle, became interested in these experiments, and determined to fully investigate the subject. His researches were actively made and promptly given to the public. From this period the true history of the subject begins—that is, from 1842, two years after Schönbein's discovery.

To M. Schönbein really belongs the credit of having introduced this subject to the attention of the scientific in and out of the medical profession. A general interest was at once awakened, and we find monographs almost simultaneously published in different parts of Europe. Its composition, nature and properties formed subjects for excited controversies, and we find such distinguished men as Marignac, De la Rive, Arago, Becquerel, Liebig, Bergmann, Berzelius, Osann and others striving for the position of teachers and expounders of this novel agent. On account of its peculiar and strong odor it received from M. Schönbein the appropriate name it now bears, ozone, from the Greek verb, *οζω*, to yield an odor. Although this name reveals nothing of the composition of this body, and most investigators have attempted to make a more suggestive substitute, yet it has been retained, both for its appropriateness and as a merited tribute to him who gave it. Ozone was for a long time claimed as a binoxide, or peroxide of hydrogen; it was written in chemical abbreviation HO^2, thus indicating the condition of the binoxide to be the most invariable. Schönbein regarded it as a regular constituent of the atmosphere, and the condition of the binoxide as that most uniformly manifested; this view was for a time doubted, but is now regarded as most generally correct. According to M. Schnepf, this fact was first promulgated in 1849, about seventeen years after its properties were generally investigated. After so many years of patient examination, it is at least most probable that this view is scientifically correct. Schönbein states that there is formed, from the same influences, a small proportion of nitric acid. The formation of nitric acid, as thus stated, was advanced by Cavendish as early as 1784, and fully proved after that time by Bergmann and others. Liebig investigated this fact in 1826, M. Boussingault in 1839, and M. Barral in 1852. Heller has attempted to prove the constant existence of nitric acid in the atmosphere, and, for this purpose, presented a memoir to the Academy of Sciences at Vienna. The report of the Academy was not entirely favorable, but he is sustained by many and prominent authorities, who not only differ with the Vienna Academy, but unanimously certify, in addition to this, that there is formed, at the same time, ozone and ammonia, &c., as claimed by M. Schönbein:—"Malgré l'autorité de cette société savante, il reste néanmoins acquis à la science, par suite des travaux de Cavendish, de Bergmann, de M. Liebig, de MM. Heller, Boussingault et Barral, que l'électricité contenue dans l'air atmospherique, agit sur les deux éléments fondamentaux de ce fluide, pour donner naissance à l'ozone, et sans doute en même temps aussi, à une proportion tres-faible d'acide nitrique et d'ammoniaque," &c. This claim, then, of Schönbein is fully admitted; for the testimony of the authorities quoted, whilst supporting the claim of M. Heller as to the constant existence of nitric acid in the atmosphere, fully proves that the same causes produce also ozone. The absolute and uniform composition of ozone has been, among chemists and philosophers, the subject of repeated analysis, and, until recently, of constant controversy. Schönbein claimed it as a binoxide, or peroxide of hydrogen; Faraday denied this, and considered ozone as "oxygen in an isomeric state," or as a "simple modification of oxygen, in an allotropic condition of that body." Mr. Williamson, of the Royal Society of London, pronounced that according as ozone is produced by a galvanic battery, developed by the electric spark, or brought forth by the action of air on phosphorus, it is a hyperoxide of hydrogen and azotic acid, or a mixture of the two. Berzelius opposed this view, and contended to prove that Faraday was correct.

At this time a series of experiments were instituted, by MM. Marignac and De la Rive, two savans of Geneva, for the purpose of demonstrating the truth of what had been so frequently advanced—that ozone is only oxygen, in the peculiar state given to it by electricity. These experiments were commenced a short time after the publication, by MM. Frémy and Becquerel, of their original views, in their joint work "Electro-chemical Researches on the Properties of Electrified Bodies." It is to MM. Frémy and Becquerel that the scientific world is indebted for all that is original in this view—that ozone is but oxygen in the characteristic state induced by its subjection to electricity. This view, original with them, has been brought prominently before the public by MM. Marignac and De la Rive. It was apparently demonstrated, by MM. Frémy and Becquerel, that the "ozonoscopes" (or tests for ozone) would not be affected unless the oxygen be electrified. In the presence of oxygen, or electricity singly, they remained unchanged; but as soon as the oxygen was electrified, ozone, it appeared, was clearly manifested. This fact was proved, it was thought, by a few simple and ingenious experiments. Before alluding to experiments of any kind, however, it is proper to briefly explain the nature and composition of the "ozonoscope." This description will be general, as well as brief, and all the details and important suggestions connected with them will be postponed for that portion of the essay devoted to their consideration.

An ozonoscope is a slip of paper or cloth, on which has been spread a compound of gelatinized starch and the iodide of potassium. Ozone, playing the part of an acid, unites with the potassium, and, in forming potassa, liberates a certain proportion of free iodine; the iodine, thus liberated, unites with a portion of starch, forming the characteristic blue iodide of starch. The depth of this blue demonstrates the amount of ozone present, or, in the phraseology commonly used, chromatic intensity becomes the measure of ozonic quantity. It is not necessary to enter farther into the description of the ozonoscopes to insure a full understanding of the chemical changes taking place when they are experimentally used; farther details will therefore be postponed until they form the actual subject of consideration.

MM. Frémy and E. Becquerel, in their experiments, placed one of these ozonoscopes in a glass tube which was filled with oxygen and then hermetically sealed. By means of metallic bulbs at each end of this tube, electric sparks were made to leap (from the point of an ordinary conductor) across this volume of oxygen. The ozonoscope was immediately made blue. It was now necessary to prove that this result was not caused by the decomposition of the iodide of potassium (on the ozonoscope) by means of the electricity used. The ozonoscope, for this purpose, was then placed in a similar tube, under similar precautions, and the tube, after being filled with hydrogen gas, was hermetically sealed. The same electrical agents were then applied to it. The ozonoscope remained unchanged. To succeed in this last experiment, the authors advise that only the purest hydrogen gas should be used, and that the ozonoscope shall be freed from the atmospheric air it contains. If the hydrogen is not absolutely pure and the ozonoscope thus prepared, the experiment fails; the least trace of oxygen, in the hydrogen or in the ozonoscope, will be sufficient to produce this failure. The oxygen, if thus present in the feeblest proportions, becomes electrified, and, reacting on the ozonoscope, generates the blue color which is the unanswerable indication of failure in this hydrogen experiment. These two experiments would apparently show that the ozonoscope, in the experiment with oxygen, is only made blue by the oxygen after being electrified, and that electricity, acting upon the iodide of potassium (on the ozonoscope) is not sufficient to produce its decomposition, and thus cause any change in the ozonoscope containing it.

Frémy and Becquerel proved that the ozonoscope, in the hermetically sealed tube containing oxygen, would be made blue when electricity was made to act upon the oxygen "by influence." This was done by dispensing with the metallic bulbs and by placing the tube between the branches of a conductor whose points touched the surface of the tube. The sparks, in passing from one point to the other, would *(in transitu)* lick the surface of the tube and thus affect the oxygen it contained; this oxygen would become electrified and the test paper rendered blue. This last experiment was, to all appearances, carefully made and really intended to remove all doubt and uncertainty; for among the many causes which are constantly and even inappreciably conspiring to vitiate these experiments, it is well known that the electric spark itself is frequently accompanied by foreign matter. This matter, it was thought, might produce some obscure but material change in the ozonoscope; and it was decided to fully guard against this source of error. The experimenters anticipated the possibility of such a charge, on the part of those ever ready to cavil against the position they had assumed, and wisely made such a charge impossible.

The next position established was, that the ozonoscope would remain unchanged in a volume of oxygen gas. An ozonoscope was, for proving this, carefully suspended in a receiver filled with this gas; after remaining ten days, it was entirely unchanged. To prove that the gas was pure, it was electrified, and the paper immediately became blue. The same experiment demonstrated the careful preparation of the ozonoscope. The gas was electrified by the introduction of platinum wires, in connection with an electrical machine.

These experiments were all made (and apparently carefully made) by MM. Frémy and Becquerel.

M. Scoutetten next furnishes additional proof that electricity alone could not produce any change in the ozonoscope. He placed one in vacuo and subjected it to intensely electrical influences. It remained unchanged, but became blue when oxygen was introduced and then electrified. It was thus *apparently* proved that oxygen alone is not sufficient to produce a chromatic change in the ozonoscope; that electricity alone is also insufficient for the production of such a change; that electrified or pure hydrogen produces no change; but that oxygen, as soon as it is electrified, produces a sensible and distinct change.

One farther step, to commend these experiments to the approval of the scientific world, was now necessary. It being proved that oxygen did not affect the ozonoscope; that electricity, hydrogen alone and electrified hydrogen produced no change, but that electrified oxygen produced a marked blue color, it was essential to prove that the iodide of potassium was, in conjunction with starch, an efficient and reliable means of investigation; that an ozonoscope, thus prepared, would always manifest the presence of electrified oxygen, or, what was *claimed* to be the same agent, ozone. The ozonoscope, chemically considered, is the iodide of potassium, for this only is affected by ozone; the starch is added, that we may perceive the degree of change which ozone produces on the iodide of potassium; but the starch in no way contributes to the production of this change. *The iodide of potassium is the agent; the starch only indicates the extent of its action.* Hence it is necessary to show that the iodide of potassium will uniformly and efficiently act; that it will always manifest the presence of ozone. If it always acts in the presence of ozone, we, by the medium of starch, recognize the *fact and the extent of its action.* Is it uniformly and proportionally affected by ozone?

To prove this fact, eudiometrical glass tubes, filled with pure oxygen, were inverted over a solution of the iodide of potassium and distilled water—oil being poured over the surface of the water, to prevent the influences of the atmosphere. By means of platinum wires, the oxygen, in the tubes, is subjected to the action of an electric current and thus gradually electrified. Becoming electrified, it acts, as electrified oxygen, on the potassium contained in the solution of the iodide of potassium and water. This portion of potassium, so acted upon, becomes potassa, by its union with a portion of oxygen. The potassium, thus uniting with a portion of oxygen, liberates a corresponding quantity of iodine; and this iodine, becoming liberated from the potassium, unites with the water, forming in part the solution. Each volume of oxygen, thus electrified in the tube and uniting with the potassium in the solution, is replaced by a corresponding volume of the solution. As the experiment progresses, the solution becomes gradually tinged of a yellow color, from the iodine liberated, as portions of the oxygen unite with corresponding portions of the iodide of potassium. At the conclusion of the experiment, the gas has disappeared, having all united with the potassium in the solution; the solution, of a deep yellow color, fills the glasses; and the capacity of the glasses becomes the measure of depression, on the surface of the solution. The results are the same, whether the glasses are filled with ozone, or with oxygen and this oxygen then electrified. In either case, we have it demonstrated that the iodide of potassium is entirely decomposed; and by starch we are able to measure and to see the degree and the end of this decomposition. By the iodide of potassium, then, we are able to detect the existence of ozone, in consequence of its decomposition, in the presence of this agent; and by starch, we are enabled to measure the extent of this decomposition. When these are properly combined, we have a true ozonoscope.

Scoutetten has published (in 1856) quite an extensive work, taking his own experiments and those of the most distinguished observers, to prove the truth of the position first taken by MM. Frémy and E. Becquerel, and afterwards so ingeniously defended by MM. Marignac and De la Rive. Scoutetten's work is styled, "Ozone, or Researches Chemical, Meteorological, Physiological, and Medical, upon Electrified Oxygen:" so fully satisfied was he and the leading authorities of the world, that ozone was electrified oxygen. The experiments are only equalled in ingenuity, care and apparent scientific candor, by their great number; they are exceedingly interesting and plausible, and, in their results, *seem* to indicate the truth of this proposition, that ozone is electrified oxygen, and the converse of this. As the work published by Scoutetten, in 1856, attracted much attention, both in Europe and America, and as its author very deservedly was awarded much credit for his views and the ingenuity with which he sustained them, it is proper that I should give his opinion, as detailed in this work, on the composition of ozone. "I consider ozone as a body subject, like all chemical combinations, to conditions which favor its composition, or decomposition; possessing constant properties which serve to distinguish it from all other agents; a body producing varied and powerful effects, and which, from the multiplicity of the parts it performs in nature and the greatness of its results, deserves a distinct and exalted place. Although we still use the word given by M. Schönbein and now adopted, *we have no doubt of the chemical composition of ozone; it is electrified oxygen.*" This position has been fortified by hard labor and scientific research; and had to sustain it the names and deliberate testimony of the most prominent and careful authorities in Europe. One year since it was accepted as the doctrine which all of the best investigators were ready to endorse and defend. Dr. Gregory, in his last and latest published opinions on this subject, thus writes:—"It was at one time supposed, that ozone contained hydrogen, and it has been described as an oxide of hydrogen, HO^2. But even when formed in contact with water, there appears to be but one ozone. The recent researches of Andrews seem to establish this point beyond doubt, and it is certain, *that perfectly dry oxygen gas yields ozone when electric sparks are passed through it.*" This is quoted from the published opinions of Dr. William Gregory, F.R.S.E., Prof. of Chemistry in the University of Edinburgh. Dr. Andrews, to whom he alludes, published similar opinions in the Philosophical Transactions for 1856; and in the Journal of the Chemical Society of London, at a later period. At the same time, Dr. Andrews declared ozone to be an allotropic form of oxygen;—he is justly regarded as good authority on such subjects.

It is seldom the case in science, that error is long accepted as truth; under the caustic tests of constant analysis and experiment, every fallacy becomes inevitably exposed. Thus has it been in regard to the long cherished and ingeniously defended position in regard to ozone—that it was nothing more than electrified oxygen. It is a doctrine that must certainly take its long rest, among the exploded fallacies of the past. Griffin, in his recent publications, states that the conversion of pure dry oxygen entirely into ozone was accomplished only once, by MM. Frémy and Becquerel; "that it is rash to come to the conclusion that this object has been achieved from three experiments, of which two failed, and the best of which presents numerous reasons for doubt." The experiments of these gentlemen have always been cited as unanswerable proofs, in sustaining the position mentioned. Again, in opposition to the claim that pure dry oxygen can be electrified, we have the published statement that Baumert was totally unable to accomplish this, after the most patient and satisfactory trial. He found, "that when oxygen was electrified with an induction coil, at the rate of *five hundred thousand sparks in an hour, the product of that enormous exertion of power, continued for an hour, was only as much ozone as separated one milligramme of iodine from the solution of the iodide of potassium.*" These are already strong and convincing proofs against the truth of the theory claimed, as regards the chemical composition of ozone. But to add the last and more recent testimony, we will quote a brief extract from a paper read by Dr. Andrews, F.R.S., and Mr. Tait, M.A., F.C.P.S., before the Royal Society of London:—"*The commonly received statements that the whole of a given quantity of oxygen gas (dry), contained alone in a hermetically-sealed glass tube, can be converted into ozone by the passage of electrical sparks, is erroneous.*" These gentlemen found "that not more than 1-100th part of the oxygen could thus be changed into ozone." Dr. Griffin says of this last statement, "it confirms, with experimental evidence, my double proposition, that oxygen alone cannot be converted into ozone, and that oxygen, in the presence of the iodide of potassium in aqueous solution, can be converted into ozone." It will be remembered that Dr. Andrews was the authority on which Dr. Gregory (Prof. of Chemistry in the Edinburgh University) chiefly, if not solely relied. But the most complete and satisfactory proof of the falsity of the theory, that ozone is but electrified oxygen, will be found in the fact, that whilst it is almost impossible to convert pure dry oxygen into ozone by electricity, it is one of the easiest experiments in the laboratory to thus convert the oxygen (by electricity) into ozone, *if water moisture or hydrogen be present.* Thus, when oxygen, in tubes over an aqueous solution of the iodide of potassium, is submitted to the electric current, ozone is generated with rapidity. Dr. Griffin explains this very naturally by saying, "that the vapor of water rises into the oxygen gas and affords the hydrogen which is required for the formation of ozone." Again, it is now demonstrated, that when hydrogen is present, ozone can always be easily prepared, either by chemical or electrical means; but when hydrogen is absent, it becomes almost impossible to thus generate ozone, even in the most feeble quantity. As is appropriately asked by Dr. Griffin, "Why is this so? If ozone is only oxygen (even in *any* state), why is the presence of hydrogen so helpful, if not indispensable, to its formation?"

[To be continued.]

IMPROPER TREATMENT OF WOUNDS IN SOME OF THE UNITED STATES HOSPITALS.

[Communicated for the Boston Medical and Surgical Journal.]

Much can be said on this subject to pain the intelligent surgeon, and overwhelm him with astonishment at the apparent ignorance in certain cases of some of the most common, as well as most important fundamental principles of advanced surgical science. Really, it would be worse than absurd to associate surgical principles with the dogmatic empiricism which has located itself in some of the Government hospitals to dictate terms of recovery; those terms are a formula of two words—viz., ℞. Cold water. This panacea seems, in these cases, to have supplanted every known remedy of whatever reputation, and is so terribly exacting and jealous, vindictive and despotic, that if, when on any of its "beats" through the wards, it should discover an unhappy poultice, or simple dressings, or tinct. opii, or tinct. myrrh., or adhesive straps, or stimulating unguent, God help the "contract" surgeon who has ordered them! If he has any friends, let them come close to him, and stand by him; he will need them every one to condole and advise with him over the note received from the medical director of that department, advising him his "contract" had been annulled for "inefficiency."

In taking up the subject matter of this essay, I would first state what I consider to be a true definition of a simple ulcer.

A wound healing by the "second intention," or by granulations, whether caused by a sharp or obtuse body, and a *simple* ulcer of *whatever origin*, present essentially the same physiological conditions, and require, the severity of the case considered, identically the same treatment. Both are healthy granulating surfaces, protected from the irritation of the air by a bland, creamy, non-irritating, *innocent* fluid; the whole being in the very best possible condition for a rapid recovery, and the vast majority of such cases would soon get well without any surgical assistance. It is not possible to *create* a better condition, and he who seeks to do so by much dressing and local applications, is a sad intermeddler. Farther than what can be done by constitutional support when necessary, there remain nothing but rest of the parts and proper cleanliness. By "proper" cleanliness is not to be understood that it should be sponged and drenched with *any kind* of application, three times, twice, or even once a day, with a *fresh* charge of lint every time; as if the more frequently the natural processes were interrupted by officious interference, the more rapid the recovery—the oftener nature were *outraged*, the *kinder* she would get. This is folly. If extremes are to be followed, if one prescription is to answer for innumerable cases, then far better were it to leave the unfortunate man to his own discretion and the "*vis medicatrix naturæ*." The wealthiest principle in all surgery, and the one to be ever present in the mind of the medical attendant, is "*to let well enough alone.*" A healthy granulating surface should have the light dressing of lint removed, the surrounding *integument* gently cleaned with a moist linen rag which should not touch the tender granulations, and fresh lint kindly, tenderly replaced in the wound, only every morning; this is often enough for inspection, cleanliness and advantage of the patient. If you have to do with a general inflammatory condition, with its attendant local excitement, pain and swelling, an antimonial saline mixture—℞. Potassæ bitart., ʒ i.; ant. et pot. tart., gr. iss.; morph. sulph., gr. i.; tinct. verat. viridis, gtt. xxx.; water, ℥ v. M. Sig. Tablespoonful every three or four hours, assisted with cold-water dressing—will soon allay all these symptoms, and cause the parts to return to a normal condition, which is a declaration that you have gone far enough with *this* treatment. If the ulcer feel better after the application of cold water, keep the lint saturated with it. When there is a vice, an impoverished constitution, or old age, be most careful how you withhold or withdraw tonics and alteratives; feed well. Of course, if the case become chronic, local stimulation will be necessary; for this purpose, I know of nothing which can excel the beneficial effects of wine of opium, wine of aloes or tincture of myrrh. Brandy and whiskey are in themselves excellent applications. In the morning, when you have replaced fresh lint in the wound, pour one of these articles gently upon it till it becomes thoroughly wet. In this chronic condition never use or think of cold-water dressing. There is nothing to indicate it, and only harm will accrue from it.

But, when is an ulcer chronic? The prevailing idea is, when it has occupied an unusual time for recovery, has hard edges, has few or feeble granulations, or none at all. This is true, but certainly not all of the truth. A breach of surface, occasioned by constitutional vice, or mechanical injury, may present, at the very outset, all the essential characteristics of one of these ulcers, and require the same remedial measures before it will recover; but more of this anon.

What I consider to be a very good rule in this class of cases is, that the moment we notice the granulations losing their bright scarlet color and small size, becoming large, fleshy, bleeding, or very white and dropsical, as is sometimes the case in the wounds of drunkards, or in the drained and exhausted frame of the bed-ridden, begin stimulating dressings and general support; if, on the other hand, the granulations have partially disappeared, or are absent altogether, something like a mucous membrane taking their place, sometimes very sensitive and painful, discharging thin sanies, or serum, or a little lymph, and badly organized, offensive pus, sufficient only to keep the surface moist and the immediate dressing slippery, occasionally where the injury is deep and extensive, a prodigious amount, rapidly reducing the patient—be *prompt* with a generous support and alcoholic dressings. If dilute alcohol in the forms of brandy, whiskey, wines, pure or suspending opium, aloes, or myrrh, be not *strong enough,* then use it undiluted, saturated with one of these gums or aloes, keeping the lint constantly wet with it. The case will begin to improve immediately. Don't use cold water about these cases. Don't wash them, but wipe them clean; if a liquid is needed, make use of whiskey, or chlorinated soda.

I would touch upon a class of injuries over which the "cold-water cure" has held despotic sway, has had many devotees and a long list of victims. I allude to the indiscriminate, obstinate, persistent use of cold-water dressing in gun-shot injuries, ignoring as it does all pathological conditions, age, extent and character of the wound; everything must have a dose of it. I protest against it as empiricism subversive of most important surgical principles and established medicine, justly based, as they are, upon an intimate knowledge of the vital actions, properties, organization, functions and *habits* of a tissue or organ in health and disease. I object to it as a most sweeping prescription, doing vast harm in many United States hospitals. While douches of cold water generally act as a tonic when occasionally used, yet continued application of cold enfeebles, debilitates and prostrates the vital powers. When used locally, the capillaries contract, the surface bleaches from a paucity of blood, grows benumbed, shrivelled and cold, in degree proportionate to the intensity of the cold and the patient's powers of resistance. Omitting those *penetrating* the skull, chest and abdomen, where there is an excess of vitality over the extremities and inflammation is most dangerous, gun-shot wounds *do not require this sedative treatment;* on the contrary, they are mostly feeble, and need stimulating applications to put them in a good condition by increasing the tonicity of the capillaries, elevating vital action, causing separation of the sloughs and the appearance of healthy granulations; else they will for days remain almost stationary, feebly reproductive, or *give up to a low degree* of inflammation and ulceration, becoming either a focus of pyæmia, secondary hæmorrhage, or phagedena, *each and every one of which might have been avoided.* I cannot find terms sufficiently strong to express my indignation against the miserable habit of pouring cold water on these injuries, or allowing them to have their own way for days and weeks, till the patients finally become pyæmic, or have hæmorrhages or phagedena.

There is not a doubt that nineteen twentieths of these deplorable results could have been avoided by the adoption of stimulating or alcoholic dressings at the outset. If the wound is seen several days or a week after its reception, and there be excessive inflammation, which is seldom the case, wait a day or so for it to subside, when, if healthy granulations and laudable pus do not appear, begin the treatment immediately. Don't be satisfied till these are obtained. If there is a bright areola surrounding the orifices, don't be apprehensive, this is asthenic inflammation:—keep the parts constantly moist with stimulating liquids, when the dry sloughs will soon be detached, the areola disappear, and beautiful granulations covered with laudable pus attest the wisdom of the treatment. In most cases the following will be found to answer admirably well:—℞. Whiskey or brandy, Oiss.; tinct. opii, ℥v.; creasoti, ʒi. M. The Government quart bottles can be uncorked, a half pint poured out, and the other ingredients added.

The special treatment of sloughing phagedena, I reserve for another article. W. H. Triplett.

Washington, D. C., August 24, 1864.

ON SYRUP OF CHLOROFORM.

By Mr. T. B. Groves, F.C.S.

I presume, from the frequency of its use, that chlorodyne is at least a *convenient* preparation. Of its medicinal value I know nothing.

It was in attempting its preparation, with a view of satisfying myself as to its reported difficulty of accomplishment, that I met with the facts forming the purport of this communication.

It has been proved by experiment that chloroform is soluble in water to the extent of 2½ minims only per ounce, and that if a spirituous solution of chloroform containing a larger proportion than the above be added to water, the excess of chloroform soon finds its way to the bottom of the liquid, with which no amount of shaking will cause it to mingle sufficiently well to enable the dose to be accurately apportioned. This difficulty has been sought to be remedied in various ways. A Frenchman proposed a syrup of chloroform and glycerine, which he reported to have a marvellous aptitude to combine with water without decomposition. Mr. Squire, however, disposed of that fallacy as soon as it appeared.

Another form, also from a foreign source, consists of 1-100th of chloroform dissolved in oil and then emulsed with gum and syrups—probably a good form for sole administration, but ill adapted for combinations.

It occurred to me that if chloroform were reduced to exactly the same specific gravity as the syrup employed, by the addition of a liquid lighter than itself, mixture once effected would be permanent; there could apparently be no tendency to separation if the theory admitted of being practically carried out. It was also obviously a *sine qua non* that the lighter liquid should not be liable to be abstracted by the syrup, or the chloroform would inevitably be precipitated in the globular form, as in the case of chloric ether.

I have succeeded in making such a mixture by reducing the specific gravity of the chloroform by means of ether, and shaking them with a definite amount of syrup. The chloroform manifests no tendency to separation, even when present in the proportion of one-eighth, but a better form is that containing one-twelfth.

The *modus operandi* is as follows:—Put into a twelve ounce bottle one ounce of chloroform and about three drachms of ether; to the mixture add the same volume of the syrup to be employed; observe carefully the disposition of the fluids; the chloroform and ether will probably sink, then add *guttatim* more ether until the two liquids, on being shaken together, appear indifferent as to their position in the system; finally fill up the bottle with the syrup, and shake well for a minute or two.

The syrup should not be too dense, or it will be difficult to impart to it sufficient agitation to ensure the complete commixture of the fluids. The syrup should be composed of gum and sugar, of honey or treacle; syrup of sugar does not answer well, apparently on account of lacking viscosity.

The syrup thus formed has the same physical properties as chlorodyne, and, like it, is readily miscible with water in any reasonable proportion (one to seven), and soluble in the water where the proportion of chloroform is within the limits of its solubility.

The advantages attending its use are these:—1st. It does not need special precaution when being added to watery fluids, it being at once diffused completely, and in no case does it give rise to a deposition of large globules of chloroform. 2d. When added in excess of saturation, the undissolved chloroform is deposited in *very minute globules*, which, after lying together for days, show no disposition to combine, but may, by a few shakes, be dispersed evenly through the liquid, forming an emulsion sufficiently permanent to enable a dose to be measured without difficulty.

I will conclude by proposing the following form for an anodyne containing chloroform (founded on one published by Dr. Ogden), which will be found to remain combined and to mix readily with either spirit or water:—Take of chloroform, ʒ iv.; ether, ʒ iss.; oil of peppermint, gtt. viij.; resin of cannabis, gr. xvj.; capsicum, gr. ij. Macerate for two or three days and filter. (No. 1.) Then take of muriate of morphia, gr. xvj.; hydrocyanic acid Sch., ♏ xcvj.; perchloric acid, water, aa ʒ ss.; syrup of treacle (or honey), to make in all 4 ounces. Dissolve the muriate of morphia in about an ounce of syrup, to which has been added the perchloric acid and water, assisting solution by a water-bath, and when cold add the prussic acid.

Here, as it is absolutely necessary to preserve the relative proportions of these potent medicines, and also to include them in a given bulk, the manipulation is not so easy. It is only to be done, so it appears to me, by balancing separately the chloroformic tincture with the morphia syrup, and then again with a plain syrup to be used in making up the exact measure of the completed article. The balancing must be effected by adding water *guttatim* to a syrup denser than necessary. Then having ascertained by the balance the proportions required, quantities of the *same* materials, no matter how great, can at once be adapted for use without further trouble.

My chief object in giving the details of this process is to enable prescribers to devise for themselves, if they think fit, a form of the *exact* composition of which they are aware—an all-important requirement, one would imagine, where remedies of great potency are to be administered.—*Amer. Journal of Pharmacy*, from *Lond. Phar. Journal.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Aug. 8th.—*Tuphlo-enteritis; Peritonitis without Tenderness of the Abdomen.*—Dr. J. Homans, Jr. (who was present by invitation) reported the following case, which occurred under the care of Dr. T. E. Francis, of Brookline, whom Dr. H. assisted in making the autopsy. The patient was a young woman, a sempstress by trade. Dr. Francis was called to her at 3 o'clock on the morning of Monday, August 1st. She had been suffering severe pain in the bowels for five hours, had vomited once, and had three or four loose discharges from the bowels.

He ordered tincture of opium every half hour till relief, and at 8 o'clock he found her free from pain. She had a coated tongue, and he prescribed a drachm of fluid extract of senna every three hours till it operated. On Wednesday the patient was easy, asking for food. She had no tenderness of the bowels, but complained of an uneasy feeling in the left side, and of general soreness. On Thursday the patient had a return of the diarrhœa, which was ascribed to her taking beef-tea. On Friday the patient was better, the tongue cleaning. On Saturday she was sitting up, said she felt much better, and was hungry. She went to bed comfortable, and slept soundly till 3 o'clock on Sunday morning, when she awoke in sudden pain, and faint. Some gin was given her, and when Dr. Francis arrived she was relieved, having eructated much wind. She had, however, a strange, anxious expression, and a bad, quick, small pulse. She fell asleep, but awoke in an hour, faint, and died in a few minutes. The patient referred all her pain to the left side of the abdomen, in the region of the descending colon. There was no tenderness over the cœcum, or in any part of the bowels; but the countenance wore an anxious expression. On Wednesday, in the midst of her sickness, her menstruation came on, naturally, and at the right time, and a nervous agitation was attributed to its accession.

At the *post-mortem* examination the peritoneum was found of a pinkish hue, and covered with recent, soft adhesions. Near the ileo-cœcal valve was a collection of pus and lymph. The appendix contained a foreign body, which resembled a pill, or perhaps some seed. It was firmly impacted, half an inch from the intestine. The mucous membrane of the appendix around and beyond it was sloughy, but there was no perforation.

Aug. 8th.—*Spina Bifida over the Sacrum; Operation; fatal on the third day.*—The patient, a little girl 7 years of age, entered the Massachusetts General Hospital, under the care of Dr. Clark, on the 9th of June, and the following report was made of her case:—

She was born with a small tumor over the sacrum, which has grown steadily ever since. She has never had any pain in it, except on pressure. On examination, it was found to be an ovoid, tense, though fluctuating tumor, 16½ inches in circumference at its base, and projecting five inches from the body, and at right angles with it; situated over the sacrum and coccyx; it cannot be reduced in size by pressure. Otherwise the child is in perfect health, has a good appetite, and seems as well as other children of her age. The tumor was covered by integument, but the parietes in some parts seemed almost thin enough to burst.

June 11th.—A trocar was thrust into the apex of the tumor, and about a pint of perfectly clear, colorless fluid evacuated. Needles, armed with strong ligatures, were then passed through the base and at various other points of the tumor, and tied and wound firmly around it. There was no appearance of spasm, and the pulse did not falter at any part of the operation.

Examination of fluid by Dr. White.—Colorless, odorless, clear, neutral. Specific gravity, 1006. It contained a small quantity of albumen, and resembled the fluid generally drawn from hydrocephalus. Microscopically—a small flaky deposit of granular matter and cells of epithelium.

12th.—The patient had severe pain after recovering from the ether yesterday, and an opiate was given in the afternoon. Much pain this A.M. Repeat opiate. Tongue white. Pulse 120, sharp and small. Pale, restless and irritated. The parts included in the ligature are contracted, shining, purple, cold, but the base is more tense, as if it contained fluid in increased quantity.

13th.—Tumor red and inflamed to-day, and somewhat hardened. Patient lies on the left side, with the head strongly flexed backward, and objects to change of position. Makes no complaint, though she has intense pain and headache. Pulse 140. No appetite. Tongue coated. Milk punch was ordered.

P.M.—Pulse 152. Skin hot and dry. Tumor very red and tense.

14th.—Still lies on the left side, with the head still more strongly flexed backward, and says she cannot move it. Cries out and complains but very seldom, although she says the pain and headache are intense. Tumor has leaked a good deal the past thirty-six hours ; the strangulated portion is quite black and cold ; the base not quite so tense, but inflamed. Opiates.

P.M.—Continues in same position, with thighs flexed to about a right angle on abdomen. Pulse 164, and can only be counted by placing the ear over the heart ; sounds very indistinct and fluttering. Respiration, which since the operation has been very quiet, is becoming a little harder and hesitating. About 8, P.M., she became quite restless, and turned over in bed, lying on the right side, and respiration was quite labored. Tumor continued to leak all the time. About 9½, P.M., she straightened her legs for a few minutes, not stiff, but as if for a change, though she kept her head flexed strongly back all the time ; and in a few minutes died quietly, without having had any symptom of spasm.

The parts were removed after death, and handed to Dr. Jackson for dissection, who exhibited them to the Society, and read the history of the case, at the request of Dr. Clark, who was unable to be present. The nerves having been cut upon each side within the spinal canal, the spinal marrow was withdrawn with the tumor, which last was dissected off from the sacrum. The cavity that contained the fluid was formed by a dilatation of the spinal membranes—a probe being passed directly upwards from it. The spinal marrow came down of full size, and was gradually lost upon the inside of the sac, nearly or quite two inches from its orifice ; two or three slender but quite firm cords went off from it, to be inserted into the inner surface of the sac, at some distance from their origin, and which it was thought might be nerves ; one or more of these seemed to be implicated in the ligature. The quantity of fat in some parts, between the cyst and the skin, was considerable. From the fact that it had been included in the ligature, the cuticle had separated to some extent, but there was no appearance of sphacelus, and neither was there any appearance of inflammation upon the inner surface of the cyst, though there was some lymph on the spinal membranes. The sacrum, which had been prepared, showed a deficiency posteriorly, but otherwise it was well formed.

Dr. J. alluded to a large collection of cases of this form of spina bifida which he had published some years ago, and showed specimens from the Society's Cabinet. (See Boston Med. and Surg. Journal, Vol. LIX., page 355.)

AUG. 22d.—*Gangrene in Patients not resident in Hospitals.*—Dr. W. E. TOWNSEND reported the following case:—

D. S., private in Co. "I," 1st Mass. H. A., was wounded, June 18th, 1864, in the battle near Petersburg, Va., the ball taking effect near the middle third of left fore-arm. After he was wounded he walked to the Corps Hospital, a distance of nearly six miles. Here his wound was dressed. The next morning he walked to City Point wharf—a distance of six miles. On the same day he went on board the transport and was carried to Washington. Arriving there, he was sent to Harewood Hospital. His wound at this time was doing well—clean and healthy. July 4th, he received a furlough to go home. Did not know whether there was gangrene in the wound or not when he left the Hospital, but it had increased in extent. He left Washington July 4th, and arrived in Salem, Mass., July 6th. Walked the same night from there to Danvers, a distance of five miles, at which place he arrived at 9 30 P.M. Three days afterwards the wound had grown worse, and pained him a great deal, so that he was confined to the house. He grew worse until July 21st, when he entered the U. S. Army Mason General Hospital, in Boston.

At this date the wound was gangrenous. After his admittance into this Hospital, it gradually began to clean and heal. Aug. 10th, it was perfectly clean and healthy. On this day, which was very hot, he walked out. The day following he again had a pass, and walked with his wife around the streets, and on the Common—in fact, he says, he "walked a good deal, and it was terribly hot," and he was very much heated. Two or three days after this, the wound assumed a new character, and rapidly grew worse; gangrene supervening, during the course of which some hæmorrhage occurred, which was fortunately checked by compression. With rest and appropriate treatment, he became again better, and is now doing well, though the wound is not yet healed.

This case was thus fully reported, to show that other causes, besides impure air or hospital contagion, cause wounds to assume the gangrenous aspect, and that over-exertion, fatigue or excitement are productive of this danger to wounded men. All the cases that have yet occurred in this hospital have been in patients who entered with the disease. Great care has been taken of the ventilation and drainage of the house, and of the proper distribution of the patients. Strict attention has been given to the care of the sponges, never allowing the same one to be used for two different persons. They are thoroughly washed with hot water and chloride of soda every time they are used, and then exposed on racks to the air.

Since June 1st, besides the patients in the house, about one hundred and seventy-five officers and men have had their wounds dressed at this hospital, some for weeks at a time, and no case of gangrene has occurred that can be attributed to hospital contagion, although the disease has been constantly present. No patient has yet died from this cause. The treatment has been the free use of stimulants and nutriment, the chlorate of potash and muriatic acid wash, and frequent dressings.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURDSAY, SEPTEMBER 15, 1864.

The Sanitary Commission; Its Contributions to Medical Literature.—When this struggle for right is ended and peace and victory are fully ours, when the fresh grief for those slain by battle and disease shall have given place to resignation and pride, and when our Walhalla shall be filled with the memories of departed heroes, and the worship of the living warrior shall have somewhat faded, then we shall come to recognize many a deed of patriotism, suffering and philanthropy now almost unnoticed. There have been from the first Christian influences at work which have made this war unparalleled in history, and which will be remembered when individual glory shall have been forgotten. There is even now but one heroic and glorious name which survives the momentous events which held the attention of the world so long upon Sebastopol, although the existence of empires was at stake and Europe's greatest chieftains were in the field. Thousands of strong men were perishing by disease when Florence Nightingale raised her white hand to save them, and departed on her noble mission of mercy. The same spirit which sent her forth almost alone, has raised up in our day a host of like spirits to prevent the errors and misery it was her late task to reform, and the labors of the United States Sanitary Commission will never cease to be regarded as one of the grandest triumphs of Christianity. What these labors have been we all know, for they have been the labor of love of a whole nation, and there is hardly a man or woman, or child even, who has not contributed in some way to its interests.

Among the doings of this noble Commission, none are more praiseworthy than the efforts it early made to thoroughly instruct its agents in their respective duties, and the publications it has issued from time to time for this purpose have been productive of great good. The beginning of the rebellion found us as unprepared in the department of military surgery as in the other requirements for the conduct of a great war, and the Commission accordingly invited medical gentlemen to prepare practical memoirs upon special subjects with which they were particularly acquainted, which were published as monographs, and distributed among the medical officers of the army. These essays were received with great favor by the profession here and in other countries, and the demand for them has been so great that they have been re-printed several times. This success has induced the late Surgeon-General to issue them in a more permanent form, and he has accordingly republished them in one volume.* In arranging these, he has divided them according to the subjects of which they treat:—1st, those relating to the prevention of disease; 2d, those on medical subjects; 3d, those relating to surgical matters. He has added a few short notes in connection with several of the subjects; but we would like to have seen this portion of the work extended, for his opportunities of verifying many of the points discussed have of course been immense. The table of contents, which we give, will be enough, we believe, to stimulate the desire of our readers to possess this valuable volume. Where so much is excellent, it would be invidious to call particular attention to any of these memoirs, but some of them are models in point of research, brevity and simplicity. Together, they form an octavo volume of 552 pages, which in splendor of paper, print and binding is unsurpassed by any medical work with which we are acquainted.

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* Military, Medical and Surgical Essays prepared for the U. S. Sanitary Commission. Edited by William A. Hammond, Surgeon-General U.S.A., &c. Philadelphia: J. B. Lippincott & Co. 1864.

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THE CASE OF SURGEON-GENERAL HAMMOND.—(*Concluded.*)—In reporting upon this case, the second charge—conduct unbecoming an officer and a gentleman—will be first considered.

Under this charge it was alleged that accused made a false declaration, in writing, that Dr. Cooper had been relieved from his position as medical purveyor at Philadelphia, because, among other reasons, General Halleck had requested, as a particular favor, that Dr. Murray might be appointed to duty in that city.

It appears from the evidence that, on the 8th of October, accused requested of the Adjutant-General that Dr. Cooper might be relieved from duty as medical purveyor, at Philadelphia, by Dr. Smith. On the 13th, he wrote a letter to Dr. Cooper, as follows:—

"MY DEAR DOCTOR,—I have just received your note. The detail for your relieval from duty went to the Adjutant-General a few days since. I told Smith to tell you of it. It was with great reluctance, even with pain, that I made the detail. I am entirely satisfied with your energy, faithfulness, and acquaintance with your duty; but I found great complaints in regard to your manners, which were constantly reiterated from medical officers and citizens of standing. I believe the change would have been made over my head had I not made it myself. I was forced to come to the conclusion that it was necessary to be done. Once before the detail was made, but I would not sign it, and this time it lay on my table several days. This is one reason. The second is even more imperative. Halleck requested, as a particular favor, that Murray might be ordered to Philadelphia. There was nothing for Murray to do there but to take your place, King's, or Smith's. The latter have both been in active service, and I thought it best to relieve you on that account.

"As A. K. Smith is, in my opinion, better suited to perform the duties of purveyor than Murray, I decided to make him purveyor, and Murray medical director of transportation.

"I assure you that, so far as your official action is concerned, I have not the least fault to find. Yours sincerely, W. A. HAMMOND."

General Halleck testified, substantially, that "to the best of his recollection," he never made any request of the accused to order Dr. Murray to Philadelphia; the only communication he ever made to him on the subject being a letter on the 1st of October, stating that Dr. Murray had served long and faithfully in the field, with the army in the West, and would like to be transferred to Eastern hospital duty, and asking the consideration of his case.

On the part of the defence, a letter from Dr. Murray to General Halleck, dated Louisville, Sept. 27th, was submitted, in which Dr. Murray stated to General Halleck, that if he would request the Surgeon-General to order him to Philadelphia, it would "be done at once." And it was claimed by the accused—but not shown—that General Halleck, besides writing the letter of October 1st, in which he asked that Dr. Murray's desire to be ordered East on "hospital duty" might be considered, also, in some personal interview, made a verbal request that he be assigned to that duty in Philadelphia.

The findings upon the first and third charges involve questions of law as well as of fact.

It was contended by the accused that the Surgeon-General had the power to control all purchases of stores for his department; to order purveyors when, at what places, of whom, and at what prices they should procure them; and further, that he might purchase them himself.

It was submitted by the Judge Advocate that the acts of Congress of April 16, and July 17, 1862, limited the authority of the Surgeon-General to the direction when to purchase, and the kind and quantity to be procured; that, having given this direction, his lawful authority was determined, leaving to medical purveyors, under bonds for the proper discharge of their responsibilities, the whole duty of selecting in such markets, and of buying from such persons, and upon such terms as their judgment dictated.

The former of these enactments provides "that medical purveyors shall be charged, under the direction of the Surgeon-General, with the selection and purchase of all medical supplies, including hospital stores," &c. &c.

The latter makes provision that medical purveyors shall give bond, with approved security, in such sums as the Secretary of War shall require, for the faithful performance of their duties. * * * * * * * *

That the natural and necessary result of the acts of the accused, as established by the record, involved a criminal spoliation of the Government treasury, which would alone have called for his dismissal from the service, cannot be denied; but when it is remembered, as shown by the proof, that this spoliation was in part accomplished by the purchase of inferior medical supplies and stores—thus compromising the health and comfort, and jeopardizing the lives of the sick and wounded soldiers suffering in the hospitals and upon the battle-fields of the country—soldiers solemnly committed to the shelter and sympathies of the office held by the accused, by the very law and purpose of its creation—it must be admitted that this fearfully augments the measure of his criminality.

The trial, which lasted nearly four months, was one of the most patient and thorough that has ever occurred in our military history; and the accused had throughout the assistance of eminent and able counsel in conducting his defence. The court, which was composed of nine general officers, at the close of this pro.

longed investigation, declared him guilty of the charges preferred, and awarded the punishment, which, in their judgment, was in accordance with the nature and degree of the offences committed; and a careful examination of the record leaves no room for doubt as to the validity of the proceedings, or the justness of the findings and sentence. J. Holt, *Judge Advocate General.*

Since the promulgation of his sentence, the following card has been issued by Dr. Hammond:—

A Card.—The undersigned has read in the *Sunday Morning Chronicle* of this city, the remarks of Judge Advocate General Holt on the proceedings of the Court-martial in his case.

He learns from this review and from the order of the President appended, that he has been dismissed the army and prohibited from ever holding office under the United States.

The undersigned has no idea that he will lose one friend by this action of the Administration, but his good name is valuable to him, not only as regards those who know him but those who do not.

So soon, therefore, as he is furnished with a copy of the findings and sentence of the Court, he will present to the public a brief history of the facts leading to his arrest and trial, a review of the record in his case, and some commentaries on the report of the Judge Advocate General.

With these he will be content to submit to the judgment of the world as to how far he has been guilty of the offences charged, and how far he has been the victim of conspiracy, false swearing, and a malignant abuse of official power.

Washington, Aug. 22, 1864. William A. Hammond.

Dr. Jos. K. Barnes, who for many months past has been Acting Surgeon-Gen., has been appointed Surgeon-General of the United States Armies, *vice* Dr. Wm. A. Hammond, dismissed the service.

Surg. Richard S. Satterlee, Medical Purveyor U. S. A., who has been stationed at New York since the war, has been promoted to the rank of brigadier-general. This honor has been bestowed, as is officially stated, "for diligent care and attention in procuring proper army supplies, as Medical Purveyor, and for economy and fidelity in the disbursement of large sums of money."

Dr. James King has resigned his post as Surgeon-General of the State of Pennsylvania, and Dr. Joseph A. Phillips, formerly Assistant Surgeon-General, has been appointed to the place.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, September 10th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	75	55	130
Ave. mortality of corresponding weeks for ten years, 1853—1863,	51.2	49.1	100.3
Average corrected to increased population - - - -	00	00	110.38
Death of persons above 90 - - - - - - -	0	0	0

Died,—In Philadelphia, Pa., Dr. R. M. Huston, 70. Dr. H. was formerly Professor of Obstetrics and the Diseases of Women and Children in the Jefferson Medical College, and for some time Editor of the Medical Examiner.

Deaths in Boston for the week ending Saturday noon, Sept. 10th, 130. Males, 75—Females, 55.—Accident, 1—disease of the bladder, 2—inflammation of the bowels, 3—congestion of the brain, 3—disease of the brain, 2—cholera infantum, 16—cholera morbus, 2—consumption, 18—convulsions, 3—croup, 2—debility, 2—diarrhœa, 8—diphtheria, 4—dropsy, 5—dropsy of the brain, 3—drowned, 2—dysentery, 8—dyspepsia, 1—scarlet fever, 3—typhoid fever, 3—gangrene, 1—disease of the heart, 1—infantile disease, 1—intemperance, 3—disease of the kidneys, 2—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 2—marasmus, 3—old age, 2—paralysis, 2—premature birth, 2—puerperal disease, 1—purpura, 1—sciatica, 1—disease of the skin, 2—disease of the spine, 1—disease of the stomach, 1—teething, 1—unknown, 6—whooping cough, 3—gun-shot wound, 1.

Under 5 years of age, 66—between 5 and 20 years, 9—between 20 and 40 years, 21—between 40 and 60 years, 20—above 60 years, 14. Born in the United States, 89—Ireland, 28—other places, 13.

THE

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CASE OF OCCLUSION OF VAGINA, WITH OPERATION, AND DEATH FROM SHOCK AND PERITONITIS. ABSENCE OF VAGINA, AND MALFORMATION OF UTERUS.

[Read before the Boston Society for Medical Improvement, Sept. 12th, 1864, and communicated for the Boston Medical and Surgical Journal.]

BY DAVID W. CHEEVER, M.D., OF BOSTON.

SEPT. 5th, 1864.—M. M., aged 22; single; born in Boston. Four years ago, was operated on to relieve suppressed catamenia. Symptoms then were swelling over the lower portion of the bowels, pain in the region of the uterus, extending down the thighs and back. Three weeks after the first operation, she was again operated on, on account of non-success of the first one, when, according to her account, the catamenia appeared and continued for three weeks. Never menstruated before or since, but says that a menstrual molimen has always been present since 14 years of age, when, at regular periods, there was pain and swelling over the hypogastrium, backache, and the usual phenomena of menstruation, without any discharge. Otherwise healthy. The patient expressed herself as miserable on account of this infirmity, having no wish to live as she then was, and desirous of submitting to anything for relief.

Sept. 6th.—The rectum having been thoroughly emptied by an enema of soap suds and aloes, she was etherized, and placed across a bed with the hips elevated and thighs flexed. On separating the labia, it was found that the vagina was of normal diameter, but terminated in a *cul de sac* about an inch and a half deep. Across the bottom was a transverse linear cicatrix, marking the site of former operations. The catheter passed freely into the bladder, and could be felt by the finger in the rectum. There seemed to be only a moderately thick septum, or wall, between these two organs. High up through the rectum could be felt a small, round, hard projection, which presented to the finger the normal sensation of the os uteri covered by the bowel.

It was evident that a cautious dissection might open a passage between the bladder and rectum up to this point. Although the risk seemed considerable, yet influenced by the account of former operations on this patient, in which it was claimed that the uterus had been reached and menstruation had taken place, although the bladder had been wounded, without, however, serious consequences, it was decided to attempt the operation. By a slow dissection, at first with the knife through the cicatrix, and afterwards with the finger in the cellular tissue, guided by the catheter in the bladder, and finger of the other hand in the rectum, a depth of two inches from the bottom of the *cul de sac* was reached without wounding either bladder or rectum. No true vagina could be found, and no protrusion resembling a sac of retained menses. Yet just beyond the finger could now be plainly felt the supposed os uteri, covered by a thin membrane. A passage having been made thus far with safety, it was thought feasible to complete it. An assistant, with the hand over the abdomen above the pubes, pressed this projection of hard tissue firmly down into the pelvis, while the membrane covering it was cautiously incised with the knife. The finger dilating this opening failed to find any os, or body of the uterus, but passing behind a small, smooth, rounded protuberance, which corresponded to the cervix, entered a free cavity and distinguished two oval, hard bodies, supposed to be ovaries, but afterwards found to be the two separated cornua of a malformed uterus.

It being but too plain that the cavity of the peritoneum had been opened, of course all other attempts were desisted from. The patient was placed in an easy posture, the urine drawn off, and two grains of opium given. When seen, four hours after the operation, she had the collapsed appearance of severe constitutional shock. Chills, followed by fever, pain, and swelling of the bowels, came on early next day. Leeches over the hypogastrium, fomentations, opium, diluents, beef-tea, &c., were given, and the catheter used frequently. She sank into a comatose state, and died on the 10th, four days after the operation.

Autopsy, 22 hours after death.—Body well developed. Breasts full. Nipples large and projecting. Areolæ rather dark, and studded with enlarged follicles, like those of pregnancy. External organs of generation perfect. A limited amount of injection and inflammation of the greater omentum; more of the peritoneum around the pelvic organs. Pus and serum at bottom of pelvis. A hole, which would admit the finger, leading from the vagina into the pelvic cavity, and between the rudiments of the uterus and the rectum. A small opening ulcerated through the left broad ligament. Bladder inflamed, and spotted internally with lymph. Rectum not inflamed. Neither bladder nor rectum wounded. Where the body of the uterus should have been, there was nothing. A nodule of fibrous uterine tissue, as big as a small hickory nut, in the situation of the os uteri.

No opening of the os could be found. On either side, but over an inch distant from the central portion, and connected apparently by a rounded fibrous cord, were two segments of the fundus of the uterus, oval in shape, and rather larger than the part corresponding to the cervix. No cavity could be found in either of these segments. Opening from the central one were two small foramina, which ran out into the broad ligament, and seemed like uterine sinuses. Ovaries and Fallopian tubes normal, but the former larger than usual. Appearances in the ovary like corpora lutea. No opening of Fallopian tubes from the lateral cornua of the malformed uterus could be found. The round ligaments were normal.*

CASES OF OVARIOTOMY.

By G. Kimball, M.D., of Lowell, Mass.

[Communicated for the Boston Medical and Surgical Journal.—Continued from p. 11.]

Case VIII.—Miss M., of Canaan, N. H., a naturally healthy and vigorous young lady, 18 years of age, came to Lowell the latter part of February last, to consult me in regard to an ovarian tumor, the existence of which she had discovered only about four months before. The increased size of the abdomen had always been perfectly uniform, consequently she was unable to state on which side the disease had originated; nor had there been any suffering other than the peculiar distress arising from great distension, and a difficulty of breathing, especially when in a recumbent position. She had taken a great variety as well as large quantities of medicine, none of them affording any relief, but, on the contrary, proving even worse than useless. She had now made up her mind, if the case should be judged favorable, to be relieved of her malady by an operation, and upon the expediency of this measure I was called upon to give my opinion. A careful consideration, therefore, of the circumstances of the case—to wit, the apparently favorable character of the tumor, the existing and daily increasing personal discomfort, and especially the manifest beginning of an encroachment of the disease upon the general health—induced me to say that I believed an operation justifiable.

Encouraged by this statement, the operation was at once decided upon, and accordingly carried into effect on the 24th of February.

Details of the various steps of the operation are not necessary; they were in no essential particular different from those in the foregoing cases where the tumor consisted of a single cyst without adhesions. Upon returning to consciousness, however, from the effects of ether, the patient complained of severe pain through the back and hips—a circumstance not at all unusual, and therefore causing, at first, no special anxiety; its persistence, however, and its increased intensity, led to the suspicion that the source of suffering might be the same as had been observed in a previous case, viz., an undue tension upon the pedicle, incident to the use of the clamp. The removal of this instrument, therefore, and allowing the pedicle (first embraced in a ligature) to fall back a certain distance between the lips of the wound, was followed by immediate relief. There was subsequently an occasional recurrence of this same kind of suffering, but it was always controlled readily and effectually by an enema containing from 40 to 50 drops of laudanum. In addition to the difficulties just named, there came on, also, a severe attack of diarrhœa, and almost simultaneously with it, a diphtheritic sore throat—a complication of troubles that for a time threatened to be more than the patient would be able to withstand. Both the diarrhœa and sore throat, however, were gradually brought under control, and in a fortnight after the operation the patient was apparently not only out of danger, but really making rapid progress towards complete recovery.

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* Similar, but not identical malformations are described by Rokitansky, vol. ii., p. 272, on Bi-partite Uterus."

From the beginning to the end of the case, everything relating directly to the operation itself went on in a most satisfactory manner, and at the end of five weeks she started for home, a hundred miles distant from Lowell, accomplishing the distance without inconvenience and with but little fatigue.

From a note received from her a short time since, I learn that she is regularly improving in strength, while in every other respect she considers herself well.

DR. GAILLARD'S PRIZE ESSAY ON OZONE; ITS RELATIONS TO HEALTH AND DISEASE.

[Continued from page 136.]

We find still another proof of the fact that ozone is not simply oxygen electrified, in the examination of one of the methods for manufacturing ozone. Ozone can readily be prepared from phosphorus, in the presence of oxygen and water; but dry phosphorus, in dry oxygen, does not produce ozone.* Dr. Griffin adds, that "this is intelligible on the supposition that ozone contains hydrogen; but not otherwise." According to this authority, "Nature sets no limits to the ozonization of oxygen, and does the work without difficulty or loss of time, when she is allowed sufficient hydrogen with which to do the work. When you reverse it, and set nature to make ozone without hydrogen, you resemble the Egyptians who set the children of Israel to make bricks without straw."

Although it is not absolutely *necessary,* in enabling us to investigate the properties of ozone, to learn its actions, to appreciate its presence, and to realize most sensibly the great *rôle* it performs in the drama of Nature, that its chemical composition should be fully determined, yet it is most desirable that there should be, in regard to it, the least possible ambiguity or obscurity. We should, however, profit by the history of the subject up to the present time, and accept what is suggested, only after the most rigid analysis and elaborate test. Above all, we should be slow to avoid all premature conclusions, and the founding, upon such questionable bases, exaggerated theories and ingenious hypotheses. Nothing, than this, can be more truly inimical to the advancement and dignity of any science. The exact chemical composition of ozone must be the subject of still farther examination and controversy; and, for the avoidance of ultimate error, it is best that this should be the case. "Debatable questions, such as these, are worth the attention of the inquiring student. We are accustomed to laugh at the fantastic notions and the false reasonings of the alchemists, but we sometimes ride our modern chemical hobbies as unskilfully as they did the wild hobbies of the middle ages." Hypercredulity is the almost universal characteristic of the students of our present time; it is a most serious enemy to the progress of any science, but, above all, to that science (chemistry) which is founded on the unanswerable logic of fact. It cannot then be said, with absolute certainty, what is the *true and invariable* composition of ozone. *It is clearly proved, however, that the recently accepted doctrine, in regard to ozone, is incorrect; it is not simply and solely electrified oxygen.*

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* Dr. Müller, of the University of Freiburg.

Ozone can frequently be perceived, by its odor, when we are unable to detect the coincident presence of hydrogen. As Dr. Griffin well remarks, in his recent views on this subject, "the difficulty of determining whether ozone is an element, or a compound, depends upon the fact that the quantity of acting matter is so small that it cannot be confined long enough to be weighed, measured and analyzed *with certainty*. Yet the majority of the reactions seem to clearly show, that ozone is not oxygen, but an oxide of hydrogen." Most of those who were the chief endorsers of the theory in regard to electrified oxygen, have abandoned it. Dr. Andrews, who was quoted as authority on this subject, as one who had expended upon it much care and labor, comes before a public society and confesses that "the commonly received statement that the whole of a given volume of dry oxygen gas, contained *alone* in a hermetically sealed glass tube, can be converted into ozone by the passage of electrical sparks, *is erroneous*." It is publicly stated, that the experiments of MM. Frémy and Becquerel, for the elucidation and establishment of this theory, *were only three*; that two failed, and the third "presents numerous reasons for doubt." Dr. Gregory and others, who based their opinions and declarations upon the previously published statements of Dr. Andrews, cannot longer be cited as authorities; Dr.

Griffin ridicules the theory, and regards it as untenable and as "a chemical hobby." M. Schönbein regards the theory as impossible in its nature, and now holds his original opinion on this subject. Dr. Richardson, of London, who has bestowed great care and labor on this subject, and who is now actively engaged in the study of it, thus writes: "I consider, with Schönbein, that peroxide and binoxide of hydrogen and ozone are all the same."—(Autograph letter from Dr. Richardson, January, 1861.) After a careful and long study of this subject and of the writings of all similarly engaged, it is certainly in accordance with the best and most reliable testimony, that ozone should be regarded as a peroxide of hydrogen. *It is certainly safe to say, that the most reliable investigators now regard it as a peroxide of hydrogen.*

It is proper that, in this connection, I should give very briefly the opinions of those who do not consider this the composition of ozone, and of those who hold and advocate views both novel and antagonistic.

Schönbein published, in 1858, an article on the subject of the composition of ozone. In this he states that there are three kinds of oxygen—"Common oxygen, or oxygen in an inactive state; ozone, or oxygen in an active state-positive; and antozone, or oxygen in an active state-negative. When these last two kinds of oxygen combine with each other, equivalent to equivalent, they constitute common inactive oxygen." On this theory, he proposes to establish two classes of metallic oxides; the ozonides and antozonides. He thus enumerates the ozonides; they are the superoxides of Mn, Pb, Ni, Co, Bi, Ag, and also the compounds chromic, permanganic and tanadic acids. The ozonides are said to possess the following properties: "When heated with hydrochloric acid, they produce chlorides, free chlorine and water. They do not combine with hydrated acids. They decompose oxygenated water into water and oxygen. They give a blue color to freshly prepared tincture of guaiacum. They are strongly electro-negative." The antozonides are the superoxides of Ba, Sr, Ca and of the metals of the alkalies. The antozonides have the following properties: "When treated with hydrochloric acid, they produce chlorides and oxygenated water. They do not discharge free chlorine from chlorides. They combine with hydrated acids. They do not decompose oxygenated water into water and oxygen. They do not give a blue color to the freshly prepared tincture of guaiacum; on the contrary, they bleach that which has been made blue by the ozonides. They are electro-positive." Although these two classes are yet retained and styled the ozonides and the antozonides, still M. Schönbein, on the authority of Dr. Richardson, of London (Autograph letter, Jan., 1861), does not now consider ozone as oxygen electrified, but as "a peroxide or binoxide of hydrogen." Dr. Richardson, in his paper read before the Medical Society of London, takes the same view. It will thus be seen that M. Schönbein has, in recent years, advocated novel views in regard to the composition, but that he has returned to his original opinions and theory. Dr. Pickford regards ozone as a teroxide of hydrogen. Dr. Prout styles it a deutoxide of hydrogen. We do not think it necessary to discuss their reasons for these opinions, as they are too entirely based upon hypotheses to be of practical value.

In a paper read by Dr. E. J. Fountain, of Iowa, before the American Medical Association, in June, 1860, and to which he invites the attention and criticism of the profession, there is a marked and prominent allusion to the subject of ozone. He observes: "I shall venture to affirm, that *ozone is simply oxygen in a nascent condition, produced by the electro-lytic decomposition of the vapor of water in the atmosphere.*" In another part of his paper, he states: "My attention has been directed to the subject in connection with recent investigations in relation to oxygen as a therapeutic agent. My observations have led to the development of a theory of the nature of ozone, which I believe to be more in accordance with well-known laws in natural philosophy, *than any heretofore advocated;* and while it embraces, as I believe, all the facts which have been observed, in relation to the subject, it clears up many of the difficulties which have been acknowledged to belong it." It is proper to say, that the author did not italicise the words thus represented in the *last* sentence. These views, from the prominence which has been given to them, by the associated circumstances, should certainly meet with respect and consideration; at the same time, they are a proper subject for criticism. Being incorporated with the published transactions of such a body, they will call forth criticism abroad, if they escape it at home. We propose, therefore, to briefly allude to them, and, with all respect proper, to mention a few facts which would of themselves, perhaps, form the most appropriate criticism.

M. Houzeau, in his writings on this subject, *six or eight years since, advocated the same views.* These views were extensively published, and, since that time, have been well known to all who have made a continuous study of this subject. They were examined and of course well understood, but, with one or two exceptions, failed to secure the attention or public notice which perhaps they deserved. It is needless to say that these views are entirely speculative, and that they were not practically supported by their original advocate. M. Scoutetten, in his work, alludes to them; he observes "that in the decomposition of the binoxide of barium, by sulphuric acid, there is an abundant production of electricity, and, immediately after this, *the formation of ozone;* it is to *this gas* we must attribute *the properties peculiar to nascent oxygen.*" Again, he alludes to the same principle or gas as *really producing* the effects *attributed* to nascent oxygen. Writing of the production of electricity as attending the decomposition of binoxide of barium, he observes: "these things take place in all analogous cases; but when the decomposition of a salt takes place slowly *electricity is developed slowly*, and does not sufficiently react on the oxygen, which thus for a time preserves the properties appertaining to it." In other words, oxygen, in such cases, where the changes (produced by the attending electrical results of decomposition) take place slowly, presents to us the mixed condition of oxygen and ozone; that in this state it is styled nascent oxygen, but that all the properties attributed to this, so-called, nascent oxygen must be attributed to the ozone which enters into its composition. Or, as Scoutetten observes, "*to this gas* (ozone) *we must attribute all the properties peculiar to nascent oxygen.*" With this exception, no author of whom we are aware has given to M. Houzeau's suggestion the complimentary attention of a public or published analysis. It of course received the notice usually bestowed on plausible suggestions and attractive hypotheses. It is fair to claim that the failure to attract any farther attention than this is sufficient, if not *prima facie*, evidence of the speculative and untenable character of any theory. We wish to be understood, in this brief notice, to have exclusive reference to the theory suggested, and in no respect to its American advocate.

Of course, to Dr. Fountain undoubtedly belongs all the credit of an original suggestion, and we are fully satisfied that had he, in his extensive reading, met with the history and review of the theory he advocates, he would have been among the first to appreciate and recognize its fallacy. Enthusiastic, as he appears to be, in the investigation of subjects forming the topics of his published papers, it is evident that he desires to bring to their study close examination and dispassionate reasoning. It will thus be seen that the theory of nascent oxygen forming the composition or active principle of ozone is not new; and, also, that it is not tenable. These form the most interesting views advocated in regard to the composition of ozone. It is now generally regarded as a binoxide, or peroxide of hydrogen. Dr. Müller, of the University of Freiburg, considers ozone to be a compound of oxygen and water.

We have, upon this branch of the subject, given in a few pages the basis, true value and recognized result of volumes of controversy. After again stating that its composition is now generally considered to be a binoxide, or peroxide of hydrogen, we pass on to the consideration of the properties of ozone. Ozone is the most rapid oxidizer known; it is colorless, of suffocating odor, somewhat similar to the admixture of chlorine and atmospheric air. The odor of ozone is too penetrating and suffocating to be inhaled with safety in a state of purity. Its power is such that one part of ozone is perceptible in a million parts of atmospheric air. It is diffusible in oxygen gas or in the atmosphere. "The extent to which oxygen can be saturated with ozone is not accurately known." It is so destructive to life that an atmosphere containing the $\frac{1}{6000}$th part of ozone is fatal. "During the electrolysis of water, which contains $\frac{1}{10}$th of sulphuric acid, Baumert found only one milligramme of ozone in 150 litres of explosive gas. Andrews found that when water was mixed with one eighth of sulphuric acid, the oxygen, separated from the hydrogen, contained four milligrammes of ozone in one litre of gas, and he states that with a solution containing one half sulphuric acid eight milligrammes of ozone may be condensed in one litre of oxygen. This is the highest published estimate, and is equal to one part of ozone in one hundred and eighty parts of pure oxygen."

The odor of ozone is perhaps most like to that emitted by an electric machine, when in rapid motion. The most familiar manifestation of ozone is that peculiar odor detected in the atmosphere after a thunder storm. When in the least concentrated, it is extremely irritating to the respiratory organs. Ozone cannot be separated from oxygen, or reduced to the liquid or solid state. Dr. Griffin states that it is insoluble in water and in solutions of acids and alkalies. All organic matters have their coloring principle speedily destroyed by it; albumen and lignin, also, whether found alone, as with the former, or as in the case of the latter, representing the base of some inorganic body. It possesses the most powerfully bleaching properties known, and rapidly corrodes even cork or caoutchouc. Metallic silver is converted by it into a peroxide of silver. It is easily destroyed by heat, and if made to pass through a tube heated to redness, is entirely destroyed. If ozonized oxygen is thus tried, only oxygen remains. It is a quick and efficient deodorizer, and if a piece of tainted meat is immersed in it for a few moments, all unpleasant odor is speedily removed. Oxygen combines very slowly with mercury, at ordinary temperatures, whilst ozone, if the metal be damp, unites very rapidly with it; most rapidly with mercury and silver, at low temperatures. It decomposes the solution of the iodide of potassium in water, giving to the water a yellow color. There must be a slight dampness for ozone to combine rapidly with most substances. It combines with chlorine, bromine and iodine chemically, and with water, but for this last there must be contact of several hours. When uniting with chlorine, bromine and iodine, there will be found chloric, bromic and iodic acids.

All baleful exhalations are, by ozone, immediately destroyed, and idio, or koino-miasmata rendered harmless. Ozone, in the minutest quantity, can always accomplish this; *it will always purify five hundred and forty times its volume of impure air.* Schönbein, from this striking fact, was disposed to think that chlorine was not an element, but a compound, consisting of chlorine and ozone; and that ozone was an element, from chlorine being regarded as a compound. Faraday has advocated the same views. These last statements are made on the authority of Dr. Griffin, of London.

Hydrogen, selenium, phosphorus, &c., when in small quantity pervading the air, render it unfit for respiration. From analogy, based upon this fact, ozone has been classed with these substances. Compounds of hydrogen are rapidly destroyed by ozone, and it is a significant fact that all miasm evolved by the decomposition of vegetable matter is in a great degree made up of this gas. Faraday considers that ozone is always present, when water exists in the form of vapor. Ozone is rapidly diffusive, and thus eminently adapted for use as a disinfectant. It is not known at what degree of heat ozone is decomposed; Dr. Gregory states, that if "the air of a jar, charged with ozone, be made to pass through a tube which is heated by a spirit lamp, the gas, as it flies from the tube, no longer affects the ozonoscope." It is decomposed by heat, and this peculiarity, with that of its great oxidizing power, prevents its injurious accumulation in the atmosphere. Were this not the case, it would soon destroy not only the dead, but living animals and plants. The pungent odor, given off during the decomposition of water by the electric current, is due to the union of a minute quantity of ozone with the oxygen formed.

Ozone is most abundant in winter, and usually so in the morning. At such periods there is no heat to decompose, or noxious exhalations to consume it. Ozone oxidizes nitrogen, forming perhaps the protoxide of nitrogen; sea-air is fully charged with ozone. The exhilarating effect of morning and sea-air may be due to the presence of the protoxide of nitrogen thus formed. Its oxidizing nitrogen is most beautifully seen in the increased green of vegetation after a thunder storm. As early as 1785, Cavendish discovered that a succession of electric sparks, passed through atmospheric air, generated nitric acid; that the acid thus formed united with ammonia, and was in the rain-drop precipitated upon the earth. Guy-Lussac has confirmed this view. The increased green of vegetation, under the influences thus mentioned, is always beautifully apparent. Atmospheric air, being thus subjected to electrical influences, generates ozone; ozone unites with the nitrogen of the atmospheric air and produces nitric acid; the nitric acid, in turn, unites with ammonia, and, as the nitrate of ammonia, descends in the rain upon the soil, nourishing and beautifying its vegetation. This makes perfectly intelligible the phenomena mentioned by Cavendish. The nitric acid, we thus see, is not formed, as was mentioned by Cavendish, by the action of the electric fluid upon the *nitrogen* of the air, but upon its *oxygen* in the presence of water, or watery vapor; *and that ozone being thus formed, it next reacts upon the nitrogen*, thus producing the results mentioned. It is ozone and not electricity which forms this nitric acid, and we have, in this, the explanation of the presence, in the rain-drop, of the fertilizing nitrate of ammonia. Ozonized atmospheric air, with lime water, produces nitrate of lime. When ozone has lost its oxidizing power, as caused by the iodide of potassium, it resumes its chemical activity, when submitted, *in a damp condition,* to the action of the electric spark. This gives us a very simple, yet true, explanation of the extreme purity of the atmosphere after a summer's storm.

Ozone unites, without decomposition, with olefiant gas. It destroys sulphuretted and seleniuretted hydrogen. Sulphurous and nitrous acids are, by it, changed into sulphuric and nitric acids. Although it is not known at what degree of heat ozone commences to be decomposed, it is known that at 268° F. it is entirely destroyed. At ordinary temperatures, charcoal decomposes it. Ozone decomposes the salts of protoxide of manganese and a solution of the ferrocyanuret of potassium. The sulphate of manganese becomes brown when subjected to an ozonized atmosphere. The sulphide of lead becomes white, and "the dilute solution of the blue sulphate of indigo is bleached" under the same influences. Silver foil, in a few hours, crumbles to dust, and is converted into a peroxide of silver when exposed to ozone in a pure and undiluted condition. Tincture of guaiacum is turned blue by its influences. The sulphurets of iron, lead, copper and antimony are converted by ozone into sulphates. It gives to the atmosphere chemically peculiar properties, and the bleaching effect of sunlight is solely due to it. The decay, diseases and deaths of animals and plants destroy ozone; the ammoniacal and sulphur gases of the atmosphere are oxidized by it and converted into salts. Ozone is absorbed by animal and vegetable substances; by albumen, casein and fibrin; by blood; by animal and vegetable miasmata. In this process, these substances are oxidized and destroyed. Ozone is thus the great purifier of the atmosphere. Many years ago, the eminent Graham made an assertion upon this subject, which (then discredited) is now fully acknowledged. After giving the views of Brewster, Ure and Davy; of Prout, Daniell, De Saussure and Hutton; of Priestley, Danbery, Boussingault and other well known writers upon this subject, he declared "that, of the compound volatile bodies of the atmosphere, few can long escape *oxidation;* the atmosphere contains, within itself, the *means* of its own purification."

These are the principal and most interesting chemical properties of ozone; we postpone, for a time, its actions and agencies, and pass on to the consideration of its artificial formation and its great sources in nature.

It is easily formed, through the chemical actions and reactions of phosphorus. Dr. Griffin has simplified this process, and we prefer to quote his method, as given by himself:—"Take a piece of phosphorus about half an inch long; clean its surface by scraping; put it into a clean two-quart glass bottle; add as much water as covers the phosphorus half way; close the bottle with a loose stopper and set it aside, at a temperature of about 60° F. Ozone will soon begin to form in the air of the bottle, and, in five or six hours, it will be abundant. Remove the phosphorus, shake a little water in the bottle, and throw that out to remove the phosphoric acid. Repeat this washing several times. The ozone is not washed away, but remains in the air of the bottle." This is a favorite way of forming ozone in the laboratory; it is convenient, and very simple. The oil of turpentine, acted upon by the air of the vessel containing it, generates ozone, provided the vessel be subjected to the effect of the sun's light. The chemical agencies of magnetism and galvanism evolve ozone. A current of electricity, passing across the surface of water, produces it.

It should have been stated, in the method of forming ozone by phosphorus, that the air in the vessel should be of average barometrical pressure, and the temperature not under 50° F. or over 96° F. Ozone is not thus formed at zero; the formation beginning at 46° F., and becoming rapid at 75° F. Ozone is formed by an electrical machine, when in rapid motion; it is detected by its odor. It is said to be particularly evident near Ruhmkorff's induction coil. During the electrolysis of water, and under the presence of particular acids, ozone is always formed. The mixed gases thus produced always manifest the presence of ozone.

M. Le Roux states, that ozone is formed by heating platinum wire to incandescence, by the electric current. Ozone may easily be formed with a little ether and a spirit lamp. Pour a few drachms of ether into a large bottle and shake the whole, that an abundant atmosphere of ether may be formed. Into this atmosphere, thus formed, plunge a glass rod (or platinum wire) heated moderately, and ozone is immediately formed. If the rod or wire be too much heated, ozone is destroyed as rapidly as it is formed. The most beautiful method of forming ozone is that mentioned when treating of the composition of ozone; placing a tube, filled with oxygen, over a solution of the iodide of potassium and water. When oxygen is electrified, by means of platinum wires in connection with an electric machine, it is, in the presence of this solution, converted into ozone. An ozonoscope, placed in the top of the glass tube, will prove this. The ozone thus formed attacks the potassium of the solution, and this, in its conversion into potassa, liberates the iodine associated with it; the iodine unites with the water, tinging it of a deep yellow; the ozone, being thus consumed, the solution (now deeply colored) rises to fill the vacuum formed and the surface of the water is depressed in the fountain. The measure of this depression represents the capacity of the tubes used. The method of forming ozone by electrifying pure dry oxygen, is now doubted, and cannot be here mentioned as a means now recognized. When ozone is formed by the decomposition of water by the galvanic pile, it is always manifested at the positive pole. Scoutetten observes, that when phosphorus is plunged into a damp mixture, consisting of four parts of hydrogen and one of oxygen, ozone is generated with such rapidity that the phosphorus takes fire and the mixture explodes. Dr. Richardson, in common with many others, uses, in his experiments on the subject of ozone, the peroxide of hydrogen, formed by the action of pure hydrochloric acid on the peroxide of barium.

On account of the extreme interest created by Dr. Richardson's experiments, and from the general attention bestowed upon his researches in regard to this subject, we shall give, in detail, his method of forming the peroxide of hydrogen, or ozone. As one of the chief impediments to the therapeutic use of the peroxide of hydrogen has been its difficult and complex preparation, and as Dr. Richardson has very much simplified this, the following description will possess a value which those engaged in the study of ozone will best know how to appreciate.

"Make, first, peroxide of barium, by heating in an iron or platinum cup, at a dull red heat, *pure baryta*. When the baryta is at a red heat, sprinkle over it dry pulverized chlorate of potassa, adding slowly about half as much of the chlorate as you have taken of baryta. After the chlorate has yielded all its oxygen to the baryta. withdraw the heat, and when the mass has cooled, put it into a closed bottle with distilled water, and wash well to remove the chloride of potassium. Be very cautious not to expose the peroxide of barium, thus formed, to the air; if you do, it will take up carbonic acid and fail afterwards. After thorough washing, decant the water and dry the peroxide slowly in a closed air furnace. The peroxide of barium, on drying, will be ready for use, and it should be used quickly. Next take twenty ounces of distilled water and add to it two fluid drachms and twenty minims of pure hydrochloric acid; then take two drachms and ten grains of the peroxide of barium; powder this in a glass mortar, and add to it a little water, to make it into a paste. Now add this paste, little by little, to the acid and water, stirring constantly. The paste will all dissolve up. The paste being now in solution, add slowly one drachm and a half of dilute sulphuric acid (one part of acid to two of water), and for a short time stir. On ceasing agitation, there will be a fine precipitate of sulphate of baryta; when this sulphate has subsided, filter the supernatant liquor. You have now made a solution containing one volume of the peroxide of hydrogen, with the hydrochloric acid with which you started free in the solution also. Once more, add to the solution the same quantity of the peroxide of barium and the same quantity of sulphuric acid; filter and repeat the process again and again, until you have charged, to ten volumes of peroxide of hydrogen, the solution in use. To remove the hydrochloric acid ultimately, add, to your last solution, pure sulphate of silver; this will throw down chloride of silver and leave sulphuric acid (SO^3) in solution. Filter and carefully neutralize with the hydrate of baryta. The process is now complete."—(Autograph letter of Dr. B. W. Richardson, Jan., 1861.)

This remarkable substance was first discovered by Thénard in 1818, but the complex mode of its preparation and its unknown therapeutical, or physiological value, has served to keep it in almost total obscurity. We postpone its remarkable properties, until these form the chief subject of consideration.

We come now to consider an important branch of our subject—the natural and extensive sources of ozone. Amid a desultory enumeration of the artificial sources of this substance, was mentioned the well-tested fact, that a current of electricity, passing across the surface of water, generated ozone. This simple discovery, as trivial as it appears, is not only interesting, but important in a scientific point of view. What is it that gives polarity to the magnetic needle, but that vast electrical belt which encircles the globe? This belt, though ever changing, is as clearly demonstrable as the most elementary truth in science. It was successful labor in this field that rendered enduring the reputation of Brewster, of Becquerel and others; and science, at least, never confers an honor unless the votary be worthy of the gift. The magnetic meridian is one of the great truths of chemical philosophy. We are forced to believe, *that a prime effect of this subtle fluid, in its magic circle, is, from the expanse of water which it spans, to elaborate this new and powerful agent;* an agent bringing purity to an atmosphere which would, otherwise, soon contain within itself the seeds of inevitable death. This, one of the chief natural sources of ozone, has not, we believe, ever been suggested, and it is now offered for analysis and approval.

Ozone is generated on a stupendous scale by the electrization of oxygen which escapes from all bodies of water. Varied and beautiful experiments demonstrate the truth of this. We will mention a few of the most important. Water being placed in an earthen-ware vessel (varnished), supported on a tripod of three glass bottles (to counteract the effect of terrestrial electricity), and covered with a glass receiver, generates ozone in very full and decided quantity. This glass bell receiver has attached, to the top of its inner surface, an ordinary ozonoscope. The experiment should last twenty-four hours, and at the close of it the ozonoscope usually registers 7 or 8 of the ozonometric scale; 10 representing the maximum quantity of ozone existing in the atmosphere. It will be observed that ozone is thus largely generated. This experiment has been made with river, rain and spring water; the result being the same. Experiments have proved that ozone is, in this manner, always formed. It is in this particular way formed most largely during those hours of the day which represent the maximum of evaporation; influenced, of course, by the temperature of the day, the agencies of the sun and the clearness of the sky. It is important to know if this oxygen, going to form ozone, proceeds from the decomposition of water by evaporation, or if it is furnished from the atmospheric air contained in the water.

[To be continued.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

AUGUST 22d.—*Catalepsy.*—Dr. C. E. WARE reported the following case.

The patient was a rather feeble-minded woman, 19 years of age, who was confined April 18th, 1864, with her first child, illegitimate. Except that she had been somewhat desponding, there had been nothing unnatural about her up to this time. Her labor was not severe nor protracted. Her physician saw her for a week after her confinement. He noticed nothing peculiar about her, except her general sadness and unwillingness to converse. She nursed her child, but took little interest in it. She paid little heed to herself, neglecting even the common calls of nature. Owing to the difficulty of getting at any of the sources of information previous to her entrance into the Mass. Gen. Hospital, it is impossible to fix the date of the commencement of the catalepsy. According to the statement of another patient in the hospital, who came from the same town, and who heard of the facts at the time, she became suddenly cataleptic on being told that her lover had deserted her. From the best evidence to be obtained, it occurred a week or two after her confinement.

She entered the hospital May 10th. She was brought there by the police, who found her in a lager beer saloon, where she had been left by the man who brought her to the city, as he said, to obtain medical advice for her. She was a well-developed person, of fair complexion, somewhat anæmic, and marked by acne.

When first seen by Dr. Ware, she was in bed, on her back. Her expression fixed. Her eyes open and rolling, with pupils moderately dilated. There was a slight tremulousness of the muscles about the mouth. Skin moist. Respiration perfectly normal. Pulse 108, good in character. When asked to protrude her tongue, she made an apparent effort to do so. Nothing abnormal was discovered about the abdomen; no tenderness. The right foot and ankle were slightly œdematous. When either of her arms was placed in any position, no matter how fatiguing or difficult to maintain, it remained so until it was moved by some one else. Sometimes when her arm was raised, if asked to do so, she would slowly let it fall, but generally she paid no heed to such suggestions. On one occasion both arms were held up an hour, and then were put down by the nurse. When raised upon her feet, she balanced herself, and remained fixed like a statue; but when gently pushed or dragged forward till she was near losing her balance, she would put forward a foot to save herself, and could thus be made to walk. This was the only voluntary movement that she made, excepting the occasional dropping of her arms, and that sometimes in the night she was observed to attempt to turn in bed. There was also once or twice a gurgling sound in her throat, as if from an attempt to speak. There was no sensitiveness to pinching, although there was a little to tickling of the feet; and once when her feet were tickled by the nurse, she burst into loud laughter. She slept well, and often heavily through the night, with her eyes closed. Food was forced through her teeth, when she swallowed it. Sometimes there was drooling from her mouth (especially after taking food) of a fluid, of a sickish, offensive odor. Her urine was involuntary. Her discharges were obtained by injections, or physic.

May 16th, she was etherized to stertor, but not to entire relaxation of the muscular system. Her pulse went up to 120, became quite feeble, and there was great lividity. As her arm fell at this point, the etherization was stopped; but up to this point the catalepsy was perfect, and it continued perfect for many minutes after all voluntary control of herself must have been lost. Immediately as the effect of the ether began to pass off, the cataleptic state returned, and was complete again long before, under ordinary circumstances, consciousness would have returned. There was no excitement following the ether, nor was the peculiar affection of the nervous system apparently modified by it in any way, except for the moment. An offensive vaginal discharge was observed soon after her entrance to the hospital. To the introduction of the speculum she paid no attention. The vagina was found intensely inflamed, and there was an extensive ragged-looking ulceration of the os uteri, with a copious purulent discharge from both. This was treated with caustics and cold-water injections.

May 18th, she was exposed to a strong electro-magnetic battery, applied to her arms and hands when they were raised in the air. It produced violent twitching of the muscles, but no arrest of the cataleptic state.

She continued in this state through May without any material change; some days the catalepsy being more perfect than others, but never leaving her entirely. Her pulse varied from 96 to 120, being generally higher in the after part of the day. Her tongue could never be seen. Liquid food was forced through her teeth, which she swallowed without difficulty.

May 21st, the vagina had quite a healthy appearance, and the ulcer on the os uteri was healing.

May 30th, she was observed to turn over frequently in the night in bed, although her condition in the day was essentially the same as before.

June 8th, the catalepsy was less perfect. She would move voluntarily when requested. She walked twelve feet and sat down in a chair without assistance. On the 11th, she walked round the room several times, and raised herself from her chair voluntarily. On the 14th, she spoke for the first time, and fed herself.

From this time she continued to improve, gradually recovering her natural condition mentally and physically. She was evidently a person of feeble understanding, but well disposed, and cheerful, occupying herself about anything required of her. She was easily guided by those about her, and much credit is due to Miss Stone, the nurse, for the kindly influence she exercised over her in encouraging her in shaking off the nervous spell which controlled her.

The cataleptic condition, according to the most reliable testimony, commenced some time towards the end of April. She could hardly be said to be free from it before the last of June. It probably existed, well characterized, six or seven weeks. She was well nourished by liquid food forced between her teeth. Her bowels were moved either by castor oil or injections. Except opiates, which were tried at the outset without marked effect, no medicine was administered.

The disease of the os uteri and vagina were treated by injections and caustic, and speedily improved. Indeed they had very greatly mended before there was any marked change in her cataleptic symptoms, and the latter had entirely disappeared before the ulcer on the os had entirely healed.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, SEPTEMBER 22, 1864.

Difficulties of Medical Journalism in America at the present Time.—Our able weekly cotemporary, the *American Medical Times*, has, we regret to say, been compelled by the adverse circumstances of the present day to suspend publication. The Editors announce in their issue of the 3d inst. that the response on the part of their subscribers to the recent moderate increase of charge, made necessary by the enhanced and daily growing cost of publication, although liberal, has not been sufficient to warrant the continuance of their Journal at the present time. They yield with reluctance, and look forward with confidence to a resumption of the publication at some future day. Not having observed any symptoms of decadence in the *Times*, we must confess to some surprise at this announcement. It certainly is not creditable to the City and State of New York, that a journal of the high character of our suspended cotemporary should thus be allowed to pass into a state of inanition. It is hardly credible that the small tax of five dollars instead of three can have turned the scale against it in the estimate set upon it by the profession there; and we really feel it is worth an effort outside of the office of the *Times* to set the vital current in motion once more, even if it were only to show that the great value of a high-toned, scientific medical publication is properly appreciated in the commercial metropolis. Of the great importance of such a journal in our principal capitals to the vitality of our profession, no one can doubt for a moment; probably the interruption in the publication of the *Times* will make this fact more real to those who have been its readers than it was before its career received a check.

In Philadelphia, also, we observe that medical journalism is staggering under a heavy load of difficulties. The *Medical and Surgical Reporter*, after dropping behind a number of weeks in the date of its issue, finding itself unable by more rapid publication to fill up the number necessary to make its present issue correspond with the current date, has jumped over the hiatus, and appears with number and date of the present time, as if there had been no gap. The Editors promise at the end of the volume to make up the full measure of reading matter. We feel with regard to the *Reporter* pretty much as we do with regard to the *Times*. We should hardly have supposed that a city which has so long been the principal seat of medical education in the land, and which is still the principal centre of medical publication, should so poorly sustain its weekly journal that it finds itself hard pushed to keep up with the march of time. Both Philadelphia and New York should sustain a weekly organ to represent the best part of the medical profession in those cities; and we sincerely hope our brethren will bestir themselves diligently to accomplish this.

As for ourselves, we would only say, in all modesty and thankfulness, that thus far we "hold our own." Of course we are subjected to similar trials to those which have embarrassed our cotemporaries, but as yet have been able to keep our heads above water, albeit not without some struggle and getting a little short in the wind. As the oldest weekly medical Journal in the country, we appeal to our friends to help us to work through the troubled waters which we are navigating at the present. Let us have not merely the needful pecuniary support, but those professional contributions which will show that the light of pure medical science still burns among us undimmed by the heavy clouds of national trial and adversity.

COMPARATIVE SUCCESS OF OVARIOTOMY IN THE CITY AND COUNTRY.—We are happy to publish the following communication from Dr. Kimball; none the less so, that it corrects an erroneous impression of ours. The successful cases of ovariotomy in this city we had not before heard of, and should be glad to have fuller particulars of them. We hope Dr. Kimball will be induced to publish the statistics of all his operations, as they cannot fail to be of great interest and value.

MESSRS. EDITORS,—In the course of some remarks which appeared in the JOURNAL of the 24th ult., upon the address of Dr. Warren, at the last meeting of the Mass. Medical Society, you have taken occasion to make allusion to my recently-published cases of ovariotomy; and in doing so, you have inadvertently given a wrong impression as to the result of this operation in city practice, stating that "you cannot recal a single instance of a fortunate termination of this operation in Boston."

During the several years I have been engaged in this particular line of surgery, I have operated in Boston four times. My first three cases terminated successfully; the fourth, and unsuccessful case, occurred last December, and an account of it has since been published.

The large proportion of favorable results, as shown in these instances, I am well aware, should be regarded as a mere coincidence, and by no means implying any superiority of skill on the part of the operator; considered, however, in reference to the question of advantage of *locality*, I find my city cases, so far as they go, furnish a larger proportion of recoveries than those in country towns.

After all, however, I suppose there can be little or no doubt, that as a general rule, patients submitting to ovariotomy or any other surgical operation of magnitude, stand a better chance of recovery in the country than in cities. I suppose, moreover, that it is a fact equally clear and well settled, that cases of *ovariotomy specially*, occurring in hospitals, are not as likely to terminate successfully, as those treated in private practice. G. KIMBALL.

Per contra to the above, an anonymous writer in the last number of the *American Medical Times*, who is strongly opposed to ovariotomy, sums up his opinions and statements as follows:—

"I may further urge in my own behalf, as well as that of my surgical brethren generally:—1st. That the diagnosis in a majority of cases of ovarian disease is very obscure, and that the prognosis is to the same extent doubtful, if not unfavorable. 2d. That many females carry these tumors through a long life with comparatively little inconvenience; that in many cases they actually diminish in size, while the inconveniences attending them often nearly disappear. 3d. That the most favorable statistics show that nothing is gained *on the whole* as regards the prolongation of life by the operation; for it is found that, taking an equal number of females affected with ovarian tumors of equal ages and under as nearly as possible similar circumstances, *the average duration of life will be greater in those on whom the operation has not been performed than in those who have submitted to it.* So that *statistics*, in fact, condemn the operation as unjustifiable. 4th. In all the other great operations the surgeon has no misgivings; he is laid, as it were, under *duress*, as Prof. Meigs would say, to operate if circumstances required, and he has no severe qualms of conscience should the case prove afterwards fatal. 5th. Far otherwise, however, must it be with every properly constituted mind when a fatal result attends an operation regarded as wholly unjustifiable by the highest authorities in surgery, and by nine tenths of the profession generally. 6th. From what has been offered, it may safely and justly be inferred that our principal surgeons do not envy the professional reputation acquired by the operation in question; they do themselves honor by showing that they have studied ethics in a wiser school, and that they prefer peace of mind and a good conscience to transient notoriety and pecuniary rewards."

COMPRESSION IN CEPHALALGIA.—M. Guyon related, in a paper read at the Academy of Sciences, that during the epidemics of yellow fever which he witnessed in the West Indies, he was often in the habit of feeling the pulse at the temporal artery. One day, having compressed it with more than usual firmness, he found that the intense cephalalgia, which is an accompaniment to this affection, was greatly relieved; and further trials made by compressing both temporals were attended with complete disappearance of this symptom. It became then a question whether this fact could be turned to practical account, and whether it would be attended with any notable inconveniences. The headache in yellow fever constitutes so predominant a symptom that some practitioners have even resorted to scarifications and opening the temporal artery to obtain relief. Compression has, indeed, been used after a fashion by the native women, who, dividing a lemon in two, bind the halves on each temple by means of a bandage passed several times around the head. This cannot, however, be long continued without a certain amount of irritation of the skin being induced; but there can be no doubt that the pain is relieved or removed in this way as long as the pressure is continued. Moreover, as well as under a more effectual mode of compression, not only is the pain relieved, but the patient comes out of his state of torpor or somnolence, breathes freely, and replies cheerfully to questions addressed to him. The best mode of exercising compression is by a semicircular curved band of steel, provided at each end with a pad resembling that of a hernia truss, and which is movable, so that the compression need not always be made precisely on the same spots. Enough space should be left between the steel arch and the forehead to admit of the cold applications being made to the latter which are found so useful in yellow fever. M. Guyon feels certain that compression will also be found of the same utility in the cephalalgia of other forms of fever.—*Medical Times and Gazette.*

M. Decaisne, in a communication to the *Academie des Sciences*, exhibits another clause in the heavy bill of indictment against the abuse of tobacco. He states that in the course of three years he has met, among eighty-three inveterate smokers, twenty-one instances of marked intermittence of the pulse, occurring in men from 27 to 42 years of age, and not to be explained by organic lesion of the heart. The absence of such lesion or other condition of health capable of inducing intermission of the action of the heart, and the fact that in nine of these instances, in which the use of tobacco was abandoned, the normal action of the organ was restored, M. Decaisne believes, will justify him in concluding that, in certain subjects, the abuse of tobacco may give rise to a condition which may be termed "narcotism of the heart," characterized by intermission in the movements of that organ and in the pulsations of the radial artery; and that, in some cases, a suspension or diminution in the practice of smoking is sufficient to cause an entire disappearance of this irregularity.—*Ibid.*

At a late meeting of the Cincinnati Academy of Medicine, Dr. Blackman presented an extraordinary specimen of osteo-sarcoma, or enchondromatous tumor of the femur, measuring four feet in circumference and weighing sixty-five pounds.

At the late annual meeting of the Am. Dental Association at Niagara, resolutions were passed, awarding to Dr. Horace Wells of Hartford, the credit of the introduction of anæsthesia in the United States, and protesting against the efforts made to bestow it upon others.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, September 17th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	45	48	93
Ave. mortality of corresponding weeks for ten years, 1853—1863,	48.1	46.4	94.5
Average corrected to increased population	00	00	103.9
Death of persons above 90	0	0	0

Died,—At North Wilmington, Sept. 15th, Dr. Silas Brown, aged 84 years and 10 months.

Deaths in Boston for the week ending Saturday noon, Sept. 17th, 93. Males, 45—Females, 48.—Accident, 1—apoplexy, 3—inflammation of the bowels, 3—congestion of the brain, 2—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 3—cancer, 1—cholera infantum, 14—cholera morbus, 2—consumption, 14—croup, 1—diarrhœa, 6—diphtheria, 1—dropsy of the brain, 8—dysentery, 10—scarlet fever, 3—disease of the heart, 1—hernia, 1—infantile disease, 3—insanity, 1—intemperance, 1—inflammation of the lungs, 3—marasmus, 3—rheumatism, 1—scrofula, 1—smallpox, 1—teething, 1—unknown, 2—whooping cough, 1.

Under 5 years of age, 52—between 5 and 20 years, 7—between 20 and 40 years, 17—between 40 and 60 years, 9—above 60 years, 8. Born in the United States, 66—Ireland, 21—other places, 6.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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NITROUS OXIDE AS AN ANÆSTHETIC.

[Communicated for the Boston Medical and Surgical Journal.]

Nitrous Oxide, as an agent for assuaging pain by producing temporary insensibility, is of recent date. The occasional blunders which accompany the early introduction of every valuable application of science have, in the case of nitrous oxide, been met with a spirit of unfairness and severity scarcely equalled; while every effort has been made to persuade the public mind that the failures of the inexperienced are due to the thing itself, not to its abuses. Travelling mountebanks, unskilled in the chemistry of this compound, have been too often guides for the unpractised operator; and from the exhibition of "fools superexcited into hysterical demonstrations," erroneous ideas of its properties and applications have been gained.

The superiority of nitrous oxide for dental anæsthesia, when properly made and administered, is susceptible of the clearest proof.

1st. It can be furnished at less than one fourth the expense of ether. With an apparatus where the heat shall be accurately and uniformly regulated by the flow of the nitrous oxide itself, precluding the possibility of overheating the nitrate of ammonia, a pure gas, unwatched, may be prepared at a comparatively trifling cost. This has been recently effected.

2d. It is without injury to the operator. Every dentist who administers ether or chloroform, is sensible of the injurious results of an atmosphere pervaded by the vapor of such anæsthetics. In the use of nitrous oxide this inconvenience is never felt.

3d. It is safer for the patient. Motives of self-interest, or a desire to shift the responsibility of failure, have led some, even in the dental profession, to decry the use of nitrous oxide as fraught with danger. Such assertions have been too often and too thoroughly refuted to require any lengthy reply. We have repeatedly given the gas freely for sanitary purposes where ether was pronounced unsafe, and never with the slightest unfavorable results. At a dental office where the gas has been made with care and extensively given, we are assured that of some four thousand cases where it has been employed, not one has shown the least injury resulting to the system. Several well-known dentists who now employ the gas, assure us that cases of temporary sickness, which used frequently to follow the inhaling of ether, now, since the use of the gas, never or very rarely occur.

Injury may result from the wrong use of any agent. In therapeutics how many safe and invaluable remedies in experienced and skilful hands, prove poisons when prepared and dealt out by ignorant tyros. Safety depends on the right use of means. God never suspends the laws of the physical system to accommodate human ignorance. What more harmless than water! And yet a wrong use has in many an instance proved fatal.

In the use of nitrous oxide, proper materials, and a right use of them, are guarantees of success. Parsimony, which tampers with life and health by employing a corrupt article of nitrate of ammonia, a half-washed gas, and unsuitable appliances for administering this, should charge the fault of failure where it belongs—on the user, not on the thing used.

Chemically pure nitrous oxide, rightly and liberally administered, we believe the most harmless of anæsthetics yet discovered. Such, with pure ammonia and the late improved facilities for heating this and washing the gas, may be easily and cheaply prepared in every dentist's office.

Attempts have been made, by interested parties, to prejudice the public against the use of nitrous oxide, by representing the ordinary mode of inhaling it as " filthy and disgusting." Such a puerile objection we deem unworthy a reply, and should pass it, but for the fact that it is not without its influence with morbid and unreflecting minds. That there are slatterns in dentistry as in culinary offices, is not a question of doubt. Who is so simple as to decry all catering, because the dishes of certain hotels have been found in some cases improperly rinsed? The same idea holds true in the use of nitrous oxide. But admitting, if you please, the return of the breath to the bag as neither safe nor cleanly (which we deny where the quantity of the gas is sufficient), the objection may be readily met by a use of the valved breathing tube attached to the cock of the bag, allowing no return of the breath to this. Such we have tried with the best of results—producing perfect anæsthesia, with a moderate quantity of the gas.

Careful, patient experiment is the only proper basis for chemical reasoning. On such we have endeavored to found our views, as expressed above. Nor will the fulminations of wordy theorists at either extreme of the chemical ladder shake us from a belief in well-attested facts. A. W. S.

DR. GAILLARD'S PRIZE ESSAY ON OZONE; ITS RELATIONS TO HEALTH AND DISEASE.

[Continued from page 162.]

THE same experiment repeated with distilled water, gives as a result number 2 of the ozonometric scale. If the distilled water be boiled so *as to expel all contained atmospheric air*, the ozonoscope remains unchanged. This proves that, in this process, the ozone is not formed from the oxygen escaping during the decomposition of the water by evaporation, but from the oxygen contained in the water. The oxygen is converted into ozone (in the presence of water) by the electrical and electro-chemical reactions which always attend the process of evaporation. If the water is made to give up all of the oxygen mechanically contained in it, ozone is not manifested during its evaporation. Distilled water, unboiled, contains a little air, enough to give number 2 of the ozonometric scale. To make these experiments more conclusive, the surface of the water was covered with oil, so as to prevent all connection with the atmospheric air. If light, during the experiments, be destroyed, the result is immediately changed. When a glass receiver is used and rendered non-diaphanous, ozone is not formed; a cloth thrown over the glass will prevent its formation; sometimes the prevention is complete; the diminution in the quantity formed is invariable. This is a most interesting fact to the student of hygiene; it is a beautiful and suggestive method of demonstrating the effect and necessity of light. Ozone will not be formed if this experiment is performed at night. It will not be formed, either in the day or night, if artificial heat be substituted for that of the sun. In the formation thus of ozone, there must be exposure to sunlight. When salt water is used, the results are the same. Rain water is most active in the genesis of ozone; it is well known that this contains the largest quantity of atmospheric air. Most of these experiments were originated and performed by M. Scoutetten. These are the most important and interesting results demonstrated in the investigation of this branch of the subject.

Without any labored appeal to facts and mathematical statistics, we can realize the stupendous extent to which this agent is generated when the sun shines down on the vast areas of sea and lake and river which form so large a portion of our globe. It has long been supposed that the pine tree exerted a chemical effect (as it is termed) upon the poison of malaria; it is interesting to find, in the existence of ozone in such atmospheres, a plain and simple explanation of this undoubted fact. As a rule, almost without any material exception, malaria does not prevail in the dry atmospheres of the pine forest. It is to such atmospheres that thousands resort during the summer months at the South, for immunity from malarial pestilence. What is the explanation? It will be recollected that ozone was manifested in the air of a vessel containing turpentine, if the vessel be exposed to the agencies of sunlight. The ozogenetic properties of the pine tree have never been mentioned by any one; yet does not reason teach, that for the production of this great atmospheric purifier (ozone) the pine forest is one of the most active agents in the extended laboratory of nature? It has always so seemed to us, and we offer the suggestion for consideration. The balmy influences of these terebinthinate atmospheres are thus reasonably explained, and the cause of their general freedom from malaria suggested. All rooms newly painted, in which turpentine has been made the vehicle of the pigment, give a deep hue to the ozonoscope. The same principle, it is claimed, must necessarily pervade the atmosphere of the pine forest. We submit the suggestion, however, without farther reasoning, for general consideration. We pass on now to consider ozone as formed by the electrization of oxygen, given off by vegetation; this being the last, but a most important natural source of this agent.

Scoutetten has announced, after many careful experiments, that plants do not give off oxygen during the day, as declared by Priestley first and many others after him; *but that this gas is ozone.* His experiments for proving this novel and original theory are at least ingenious and plausible. They deserve close examination and criticism, and, if invariably true in their results, cannot be too generally known. This laborious philosopher should receive all possible credit for his originality, enthusiasm and energy.

If a bell glass receiver, with an ozonoscope attached to its inner surface, be placed over vegetation, it is soon filled with a gas which gives a blue color to the ozonoscope. No one claims that oxygen can *possibly* produce this result. To prevent the possibility of terrestrial electricity influencing the result, the plants were suspended by silken strings. The ozonoscope usually registered 5 or 6 of the scale. Ozone was not thus formed, if the experiment was made at night, or if the sun-light was obstructed. This experiment would very prettily demonstrate the actinic agencies of sunlight.

It was important, in this experiment, to discover whether ozone was formed from the oxygen attending evaporation from the surface of the leaves, or whether it was due to the chemical and vital actions taking place in the plant. This was determined by inverting two glass receivers over water and vegetation respectively. The receiver over the water gave no evidence of ozone, whilst that over the vegetation soon became filled with a gas which discolored the ozonoscope. This experiment proves, what has already been proved, that ozone is not formed from the oxygen of evaporation; it also proved, that ozone is formed during the day, from the chemical and vital actions taking place in plants. It was thus demonstrated, that plants evolve ozone when under the influences of sunlight; that this action ceases at night, in artificial obscurity, and where the plants do not receive the direct rays of the sun. If a glass receiver is inverted over dried earth deprived of vegetation, the ozonoscope remains unaltered. These facts established, we can appreciate, if not realize, the vast amount of ozone discharged from the vegetating surfaces of the earth. When reflecting upon its various other sources, we cannot but feel the important part it must play on the health and well-being of humanity. We will now consider the ozonoscope, in its importance, nature and manufacture.

As soon as ozone was discovered by M. Schönbein, he sought for some reliable means of detecting its presence. After various experiments, he selected the iodide of potassium as being best adapted to this purpose, and combined with it some substance for manifesting the amount of decomposition taking place in it, when subjected to the influences of ozone. This substance is starch. Many other tests have been suggested; some ingenious and delicate, but none answering so well as the test selected by M. Schönbein. In making the ozonoscopes, it is essential that the iodide of potassium should be *absolutely pure. The commercial preparations are totally unfit for experimental purposes,* and only obscure and vitiate the results when used, the experiments being not only defective, but the deductions altogether false. The *best* commercial preparations are adulterated, and although not sufficiently so to render them unsuitable for therapeutic purposes, still they are totally unfit for the laboratory. Those designing to work in this field should obtain their instruments from Germany, or France; the ozonoscopes are manufactured there with great care. It is very difficult to obtain, in America, a perfectly pure preparation of the iodide of potassium. Of course there are many laboratories where it might be manufactured, and our pharmaceutical chemists could prepare as good an article as could be obtained anywhere; but the important fact to be recognized is, that our laboratories do *not* produce a good preparation, and our chemists do not feel sufficiently interested to supply what is wanted for such purposes. There is one source for obtaining a perfectly pure article, in the United States, which should be known. This is at the U. S. Navy Laboratory attached to the U. S. Hospital near the Navy Yard at Brooklyn, Long Island. At this laboratory (under the charge of Dr. Beach, an accomplished chemist) the Government manufactures all preparations intended for the Navy. Dr. Beach, we are authorized to say, will always take pleasure in furnishing a perfectly pure KI, when authorized by the Secretary of the Navy to do so. It is superfluous to say that this permission can always be readily and immediately obtained; and thus one great obstacle and inconvenience be removed.

The ozonoscopes are thus prepared:—℞. Potassii iodid., gr. i.; amyli pulv., gr. x.; aquæ dist., gr. c. (by weight). The starch should be free from extraneous matter, and the water always distilled; rain water will not answer, as it frequently contains nitric acid, and this would injure the preparation. The iodide of potassium should be dissolved in the water; the pulverized starch added to the solution, and the mixture placed in a porcelain vessel, held over a "slow fire." Stir the whole, with a *glass rod*, and when it gelatinizes, set it aside until it is cold. This paste is then spread on white paper, which, when it is dry, is cut into slips, two inches long and half an inch wide. In spreading the paste on the paper, it is best to use a wooden knife, as metal may contain some impurity that would injure the preparation. These papers should then be carefully placed away, and not roughly handled, *for the paste scales off* and carries with it the iodide of potassium. Bibulous paper was first used, but Berzelius pointed out its constant imperfections, and white glazed paper has been substituted. Chlorine (or other bleaching agent) gives to the test paper a slightly red tint, from the chemical reactions caused in the iodide of potassium. There are other objections to the use of paper for the ozonoscope, and most observers have in a great measure abandoned it. In its place is used a material which fully accomplishes all that could be desired. This is cotton muslin; and when properly prepared, there can be no difficulty attending its use. Ordinary bleached muslin, of the best description, should be obtained, and carefully washed and re-washed in hot distilled water, to remove any chlorine or lime that may be present. It is then torn into pieces, about three inches wide and of length corresponding to the original width of the muslin. Steep these pieces, for twelve hours, in a solution of the iodide of potassium and water, one grain of the iodide of potassium to one hundred grains (by weight) of distilled water. When fully dried, spread with a wooden knife upon one side of the cloth, the mixture of the iodide of potassium (one grain), starch (ten grains), and distilled water (by weight one hundred grains). When this mixture has nearly dried, let the pieces of cloth be carefully "ironed," on the sides unprepared. They may then be cut into slips, three inches in length and one inch in width, and carefully placed in glass bottles for use.

At the Leeds meeting of the British Association, in 1858, Dr. Lankester exhibited his instrument for the convenient disposition of the ozonoscopic cloth and for registering, hourly, the amount of atmospheric ozone; it is so exceedingly simple, yet efficient, that most observers have adopted it. This instrument moves like a clock; and on a shaft, in direct connection with the machinery, is wound the ozonoscopic cloth. The instrument in its action unwinds a given length of cloth during every hour, and this piece, so unwound, is kept constantly exposed to the atmosphere. By a convenient and compensating arrangement another shaft, also in connection with the instrument, winds up this cloth as it is unwound from the first shaft. The cloth, as it slowly passes from one shaft to the other, is made to move before an aperture in the side of the box and is there exposed to the atmosphere. The cloth should be kept damp during its exposure. Some very simple method will answer; a piece of soft cotton thread, or cord, with one end resting in a vessel of *distilled* water and the other placed in contact with the ozonoscopic cloth, so that by capillary action the water will pass from the vessel to the cloth—or any other method that the most ordinary ingenuity would suggest. An ordinary clock will answer the purpose of Dr. Lankester's apparatus, and is always easily attainable. It will only be necessary to have added some shaft, which, by being placed in connection with the machinery, will wind up the cloth as it is unwound from any *selected* shaft of the clock. The hours and half hours should be marked, on the unprepared side of the cloth, in ink, and in this way it will be very easy to tell, not only the degrees of ozone during any given time, but the exact hour or fraction of an hour at which each degree was thus registered. If one inch of cloth be exposed every hour, a division of the cloth into inches and half inches will afford a perfect index of time. Whether the cloth be cut into slips, or used in entire pieces, it should always be dampened at the time that it is compared with the ozonometer, for determining the number expressive of the chromatic shade generated. There is nothing in the atmosphere that will color this cloth but ozone. Oxygen, whether dry, damp, or heated, produces no change in it; chlorine does not exist in the air; iodine, though claimed to be occasionally present, is proved never thus to appear in an atmosphere in its normal condition; so that when this cloth is changed it must be by ozone only, and the degree of the change marks accurately the quantity of ozone present. Iodine must be in its *free* state to give the blue test with a cold solution of starch, and the liberation of iodine (when the iodide of potassium is used) is usually accomplished by adding a few drops of acid or chlorine water to the mixture. When the ozonoscope is used, ozone plays the part of an acid; it unites with the potassium, converting this into potassa, whilst the liberated iodine unites with the starch, forming the blue iodide of fecula. The depth of this blue will depend upon the quantity of iodine liberated, or, in other words, upon the quantity of ozone present.

Dr. Charles Smallwood (Professor of Meteorology in the University of McGill College, Montreal, Canada East) has instituted and published a series of beautiful experiments, serving to show the effect of different colored light upon the ozonoscope. "By exposing the ozonoscopes under different colored glasses and also to the action of polarized light, the following were the results. The expression 1.00 being for saturation gives the ratio exposed, to

Direct light	·73	Orange light	·55
Polarized light	·64	Purple light	·51
White light	·57	Blue light	·45
Red light	·58	Green light	·41

"The following table of the properties of direct light, through colored media, is given for the sake of comparison:—

Medium.	Light.	Heat.	Chemical Action.
White	7	7	7
Red	4	5	6
Orange	6	6	4
Purple	3	4	6
Blue	4	3	6
Green	5	2	3

The whole sunbeam consisting of luminous rays, heating rays and chemical or actinic rays, light therefore, passing through the colored media given, becomes deprived of one or more of these properties. In submitting the ozonoscopes to these colored rays, it is shown that light passing through a green medium prevents the formation of ozone, in the proportion of 41 to 73. Polarized light would seem to possess the least influence on the development of ozone; it gives the proportion of 64 to 73. Next comes white light, then red, orange, purple, blue and green. Green, it may be remembered, possesses but half the chemical or actinic action of red, purple and blue. Orange, which possesses the greatest amount of luminous and heat rays, gave ozone in the proportion of 55 to 73." Dr. Smallwood mentions that the ozonoscopes placed, during the prevalence of the "potato rot," between the rows of the diseased plant, were much more deeply colored than those placed in the usual position. His ozonoscopes, placed among vegetables and flowers, gave no very decided results, *but he did not use the glass bell receiver during these experiments.* It is manifest that ozone may be given off from vegetation in the most *abundant* manner, but unless this gas be confined in a jar or receiver, it does not become sufficiently concentrated to produce decided effects upon the ozonoscope.

Dr. Smallwood has been long engaged in the study of ozone, and his views are at all times instructive and interesting. In a very able paper, read before the American Association for the Advancement of Science, held at Montreal, he, with many others, took the ground "that a moist and humid atmosphere was necessary to the development of ozone." This, it will be observed, is also in direct antagonism to the claims of those who assert that ozone is abundantly generated in the electrization of pure and dry oxygen. Before dismissing the subject of the ozonoscope, it will be proper to mention the different tests which may be used for demonstrating the presence of ozone.

The ozonoscope, saturated with a weak solution of sulphate of manganese, becomes brown when exposed to ozonized air. Spirituous tincture of guaiacum is turned blue by ozone. Sulphide of lead is whitened by it. Sulphate of indigo in solution is bleached by it. Silver foil, in an atmosphere of concentrated ozone, is changed to peroxide and crumbles to pieces. An alkaline solution of lead has a precipitate of peroxide formed, when submitted to the action of ozone. By it all the preparations of protoxide of manganese are changed to peroxides. Sulphurets of lead, copper, iron and antimony are converted by it into sulphates. Arago and Schönbein frequently used plates of platinum as tests; when ozone is present, they become negatively polarized. Bouchotte has used a novel and beautiful method of estimating the quantity of ozone in the atmosphere. Observing that silver or copper was rapidly oxidized by ozone, he placed a thin sheet of copper on acidulated water; the ozone of the atmosphere oxidizes it, and, with the acidulated water, transforms it into an acetate of copper; this is taken into solution; the liquid is then evaporated, and the salt of copper, being weighed, gives the ratio of ozone present. It is evident, however, that all of these cursorily mentioned tests are more curious than useful, and are of not a sufficiently practical character for the accomplishment of any prompt or decided result. The iodide of potassium is the only test upon which we can rely, and it is always efficient, whether in the most delicate or extended series of experiments.

With the preparation of the ozonoscope, it became essential that some method should be adopted for permanently registering the shade of the ozonoscope after each experiment; or that some scale should be adopted, each degree of which would represent a certain shade of the ozonoscope after immediate use; this shade soon changing after the experiment is completed. It is also necessary that such an instrument should be accurate and uniform, as upon its results all the calculations and deductions, relative to hygiene and meteorology, would be based. An instrument for this purpose was in time suggested, and, *although radically defective and totally imperfect,* is the only one now used by most observers. This instrument is called an ozonometer. It is formed by dividing into ten (10) shades or degrees, the chromatic interval existing between the entire absence of ozone, which is registered as white, to the deepest blue which ozone can possibly produce by the decomposition of the iodide of potassium in the presence of starch. This ozonometric scale extends from zero, which indicates the total absence of ozone, to ten (10), which represents the deepest shape of blue resulting from the decomposition occurring in the chemical constituents of the ozonoscope. We have thus ten (10) degrees or shades on the face of the ozonometer. It will readily be perceived how extremely imperfect and objectionable this instrument must be. The division of the chromatic interval, from white to deep blue, is made *arbitrarily,* and this is but saying that such a division must be *always variable and exceedingly inexact.* It is manifest, that when *no scientific rule* has ever been suggested for the accurate and uniform division of this chromatic interval; that when each observer, experienced and inexperienced, scientific and superficial, is left to his own judgment and chromatic discrimination, the shades representing the different degrees of their instruments must vary *indefinitely and interminably.* It is difficult to imagine, even, how a more ingenious method could be suggested for producing *constant discrepancy and confusion;* how greater error and fallacy could be created, than by this rude and reckless method of registering the most delicate of chemical reactions. Few persons, in actual conference, can agree as to the exact difference which, in two chromatic shades, should constitute a degree. How utterly impossible, then, does this become, when, for two persons, we have hundreds, and these not in actual conference, not even in correspondence with each other, but separated by thousands of miles, and in reference to each other totally isolated; where the subject of error and confusion is not between *two* shades only, but *ten.* How, under such circumstances, can there be harmony; how even comparative uniformity? And if these be absent, for the elucidation of the problems occurring, of what practical use is this instrument? What would be the result, if thousands were investigating the subject of heat, *each using thermometers not known to be constructed on different scales, but supposed to be exactly similar; yet not corresponding in a single degree.*

A defect in the ozonometer, now used, would of course make but little difference with the individual observer, as it is evident that his maximum and minimum would have reference to but a single locality; that the real errors would compensate each other in deducing a mean; and that his instrument, however differing from those used by others, would at least give him a fair exposition of the atmospheric changes occurring around himself. But when these instruments, *so differing with each other, yet assumed to be similar,* are used by all observers, there can possibly be nothing but discrepancy in general results; errors and antagonisms in deduction. These constant and *still existing* defects must embarrass every observer, and vitiate the entire results; though they do not in any way interfere with experiments made in reference to a single locality. If cholera marks the absence of ozone in Paris, as declared by an observer there, and attends the same atmospheric phenomena in Berlin, as noticed by similar authority in that city, the deduction is clear and satisfactory, though the instruments used may be dissimilar. But if in Paris it is declared that influenza becomes epidemic when the ozonometric record is 3, when it is only epidemic in Berlin at 1, it does *not* prove that the *same* atmospheres do *not* give the same pathologic results, but, to those familiar with existing difficulties, that the ozonometers used differ perhaps and almost certainly *two* degrees in their scale; and that the atmospheric effects are *identical.*

There has been always more or less discrepancy, when many observers have compared or published their ozonometric records, with a view to some decided deduction, or for the establishment of some law attending certain ozonic phenomena. Whilst difficulties of this kind have almost invariably characterized attempts at deductions, based *on aggregate records,* there has seldom been any trouble with any individual observer. It has been found, for instance, that a certain disease has manifested itself *repeatedly* at a certain place, as a coincidence with some ozonometric number, when, to the confusion of those interested, the same disease has prevailed at another locality when the condition of the atmosphere was entirely or conspicuously different. Here, as is manifest, the sole cause of the difficulty was not in atmospheric difference, but in instrumental imperfection and discrepancy. The ozonic statistics and records abound in instances of this kind. The published tables of Boeckel Sr., Wolf, Simonin Sr., Billiard and others, are instances of these perplexities. The number of one ozonometer that represents average health, may in another indicate the incipient appearance of disease. This has occurred. Although the discrepancies thus mentioned have not been very great, yet they have been the cause of much disappointment and confusion. The conviction, in this respect, now is, that these discrepancies are not in atmospheric peculiarities, but the results of dissimilarity in the instruments used. Although this difficulty has been universally felt and regretted, yet, so far, nothing whatever has been done to remove it.

After repeated experiments and many failures, we have perfected (as we believe and hope) an ozonometer which fulfils every purpose desired. So far as we are aware, and so far as we have been able to judge, by competent testimony on the subject, it is calculated to remove all of the past and present difficulties, in connection with this branch of the subject. It is very easily made, simple in its construction, and *insuring* uniformity in *general* results. There is a peculiar enthusiasm which always characterizes the claims and writings of those who submit such offerings as contributory to science. This enthusiasm is the fruitful cause of endless errors, and can only be entirely destroyed by the caustic touch of analysis and criticism. We have endeavored to guard against it, by presubmitting ourselves to such a remedy. Whilst the correspondence, in this connection, furnishes all the testimony we could desire, it cannot be submitted without a violation of good taste and essential etiquette. These ordinary rules of propriety and a natural loathing for the practices of the empiric, induce its entire and total suppression; yet such is our desire to do all things possible, for the honest fortification of our position, in regard to this suggestion, that, even at the risk of censure, we will introduce an extract from a single letter:—

"I must say, that the construction of a uniform scale of shades is very much to be desired, and I really do think that your method is a good one, because it is uniform and the shades constant and easily attained. I congratulate you on your ingenuity and thought on this subject, and would advise, by all means, the adoption of your method of fixing the tints," &c.—(Autograph letter from Dr. Smallwood, Professor of Meteorology in the University of McGill College, Montreal, Canada East, February, 1861.)

This extract is introduced, with the double purpose of strengthening, by all proper means, our position in regard to the ozonometer presented for consideration, and (as Dr. Smallwood's recommendation can influence many who would discard the suggestion with a *passing notice)* of inducing as many observers as possible to give the instrument a fair and impartial trial. We have introduced this extract with much reluctance, and, for obvious reasons, after much hesitation and reflection; and we feel that such a course, even with the motives given, may give rise to censure; we hope, however, that the reasons mentioned will be regarded as sufficient for the justification of the action adopted. We will briefly describe the instrument mentioned.

With the materials used, observers must of necessity have ozonometers identical in shade and degree. The scale is the same as that hitherto adopted; it has been considered best not to change it. This scale is from zero, representing a perfect white, to degree ten (10), which indicates the deepest blue, caused by the decomposition of the iodide of potassium in the presence of starch. The chief difference in the construction of the two scales is, that the old scale is made arbitrarily, and the new by a regular rule; the chromatic intervals on the scale being equally and regularly divided. In the ozonoscope, ozone plays the part of an acid; in the ozonometer, we propose that, conversely, an acid shall play the part of ozone. The materials used are the iodide of potassium, nitric acid, and distilled water. The iodide of potassium can, with proper care, be now obtained in a state of purity. There can be no difficulty in this respect. The nitric acid can be obtained from any druggist, and, by a very simple process, reduced to the condition required. In the construction of the ozonometer, the nitric acid should be of exactly 1.42 specific gravity, and this can be insured by subjecting the acid to ebullition. As purchased, the acid will never be of greater specific gravity than 1.42, though it can be made at 1.5; yet this is seldom if ever done; and if so, the acid soon absorbs moisture and sinks to 1.42. As we have mentioned, though the acid can be made at 1.5, and may, at a few laboratories, be purchased of this strength, yet the *acid of commerce* does not, in specific gravity, exceed 1.42; it is frequently less than this, but, if this be the case, the same process (ebullition) will raise it to 1.42. In nitric acid at 1.42, there is, according to Dr. Ure's table, 60.572 of dry acid in 100 parts. The acid of commerce is usually white or yellow; if the first, it consists of nitric acid and water; if the last, of nitrous and nitric acids. The yellow color is due to the presence of nitrous acid. If water is added to this mixture, the nitrous acid is decomposed, forming nitric acid and nitric oxide. The nitric oxide is given off in yellow fumes, and there is left a clear mixture of nitric acid and water perfectly white. We can, by adding water to *any* preparation of nitric acid, succeed in thus obtaining a clear and simple mixture of the nitric acid and water. Now there is this very interesting and important chemical peculiarity about nitric acid. If it be a concentrated and a heavy acid, its density is altered in ebullition, by the loss of more acid than water; if it be a weak acid (acid and water), its density is also altered, in ebullition, by the loss of more water than acid. Thus, in this process of ebullition, a *strong acid loses acid and sinks to* 1.42; *a weak acid loses water and rises to* 1.42; for at 248 F. it distils over, of this exact specific gravity.

[To be continued.]

ON THE TREATMENT OF ALBUMINURIA IN CHILDREN.

[At a recent meeting of the Royal Medical and Chirurgical Society a paper was read on this subject by Dr. W. H. Dickinson, of which we copy an abstract and the discussion following it, from the *Medical Times and Gazette.*]

The granular kidney appears to be unknown in childhood. The only form of disease which produces albuminuria at this period of life is that which produces enlargement of the kidney and gives it a smooth mottled exterior. This is, in fact, a renal catarrh. The tubes become obstructed by an excess of their own epithelial growth, and hence arise all the evils of the disease. If only there is a free escape for the contents of the tubes the vascularity of the gland will be relieved by secretion, and the disorder will soon be at an end. The principle of treatment must be to send as much water as possible through the organ. This fluid is devoid of irritating properties, and probably passes through the gland rather by filtration than true secretion. With these views the patients were restricted to a fluid diet. They took from two to four pints of distilled water daily, and small doses of the infusion of digitalis. When the active symptoms had subsided iron was given. Twenty-six cases were adduced in which this treatment had been pursued. Twenty-two recovered completely; three were lost sight of while improving, but while still having a small quantity of albumen in the urine; one case did badly, and eventually died under other treatment. Many of the cases were of great severity. These results appear better than those afforded by other methods. Among the in-patients at the Children's Hospital otherwise treated, 11 died out of 39; and of 69 cases treated by Dr. Miller in Dispensary practice, 8 died. It was found that on an average the little patients were restored to apparent health in 30 days, while 15 days more were needed to get rid of the last traces of albumen. The use of the water did not seem in any case to increase the dropsy, but the contrary. It was usual, however, when the swelling was great to let the digitalis set up a certain amount of diuresis before ordering the full quantity. The subsequent use of iron was believed to correct the effects of the disease, without influencing the disease itself. On the occurrence of secondary disorders, such as convulsions, or acute inflammatory attacks it was argued that the treatment of the renal mischief should be sedulously persisted in, with such additions as might be called for. The anæmic state of brain, in uræmic convulsions, and their frequent occurrence after the exhaustion of diarrhœa or vomiting, were urged as reasons for abstaining from depressing remedies. A case was cited in which, under these circumstances, small doses of opium had been used successfully. A case was also given in which acute pleurisy had passed off under the use of only local measures. The paper professed to deal only with the albuminuria of childhood.

Dr. Fuller had had opportunities of witnessing the author's treatment, but chiefly in adults, in whom it was not so successful as in children. In adults the renal affection was of longer standing. He had tried it in a child in private with success. It was successful in the dropsy of adults, but not so uniformly so as in dropsy in children after scarlet fever. If Dr. Dickinson's views were correct it was easy to understand that it should be more useful in children than in adults.

Dr. Basham said there were many points of practical value in the paper, and yet one or two things for comment. First, in cases where the renal affection followed scarlet fever, let the treatment be what it might, the majority of patients did well. No doubt the diuretic influence of water was beneficial, but he thought the theory brought forward was open to a difference of opinion. He ventured to think that there was not merely a blocking up of the tube, but also some change of the gland-cells—they had become effete cells, and accordingly were thrown off, and these, of course, obstructed the tube. But we know that nature tries to get rid of them, and no doubt diluents are of help in this way. He should, however, think the natural tendency of such cases to do well had more to do with recovery than the treatment.

Dr. Hillier had tried Dr. Dickinson's plan, and had found it scarcely so satisfactory. He (Dr. Hillier) agreed with Dr. Basham, that such patients, however treated, if seen early, would nearly always do well. His plan of treatment was to keep them in bed, to use hot-air baths, to give purgatives and good diet. Occasionally he had under care a severe case, and then had tried the water plan, but had been obliged to resort to other means. Perhaps, however, he had been too timid. In one case purpuric symptoms came on. There was considerable hæmaturia and epistaxis. With the water treatment the patient did worse, but when it was given up and gallic acid was administered, the patient recovered.

The Author, in reply, said that he was quite aware that the majority would get well if left alone, but a great number would not. He had been able to collect a large number of cases of deaths in the post-mortem books of St. George's Hospital. In reference to Dr. Basham's remarks, he said that the first changes were, he believed, in the quantity and not in the quality of the epithelium. In reference to Dr. Hillier's want of success, he would fall back on the explanation which Dr. Hillier himself had suggested, viz., that the treatment was not persevered in. The only fatal case in the paper was the one in which the vapor bath had been used.

Mr. Bainbridge asked if the treatment would have been equally successful without the digitalis? He had seen many such cases during the last month, and the patients generally were thirsty, and, as a consequence, without any special direction, drank a great deal of water.

The Author said that the water treatment had been tried alone in three cases.

Dr. Stewart related a case of dropsy following scarlet fever occurring in a woman who had recently been confined. Suddenly convulsions came on, followed by unconsciousness. Cupping the loins, and other measures, were followed by success, and he thought it a case in which the use of diluents would not have led to an equally favorable result.

Dr. Basham said that he thought that if any pathologist well versed in the use of the microscope would examine the gland cells of the kidney of a child who had died by accident, and then those of one who had died from renal disorder, he would find a well-marked difference. In the latter the cell was cloudy, and the nucleus obscure. It had become an effete and imperfect cell.

Dr. Fenwick said that he had examined the mucous membrane of the stomach in scarlet fever patients, and had found changes in the epithelium there as well as in that of the kidney.

In reply, Dr. Dickinson said that no doubt there was a change in the cells, but not primarily.

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BANTINGISM.—Everybody must have heard of stout Mr. Banting by this time, and many have read his almost pathetic pamphlet, wherein the adventures of this fat gentlemen in search of some one to relieve him of his burden of obesity, and his happy triumph at last, are related gratis for the benefit of his fellow-creatures. He was, it seems, 66 years old, about 5 feet 5 inches in stature, and weighed 202 pounds. He says he was unable to tie his shoe, or to attend to "the little offices humanity requires," without a good deal of difficulty. He was compelled even to go down stairs backwards to save the strain upon his joints, which he was obliged to keep bandaged, and could not help puffing and blowing on any slight exertion. He never found a seat large enough for him in an omnibus or at the theatre; moreover, the multitude would laugh at him, and he appears to have been wanting in that non-conducting shield of insensibility and jollity which generally surrounds the real fat man. He was miserable, in fact, and did almost everything to "accomplish the great end of stopping and curing obesity." He starved himself, took to boating, tried sea-air and bathing, swallowed, as he says, gallons of liquor potassæ and other physic, rode on horse-back, went through a course of Turkish baths, consulted a host of physicians, &c. &c., but all in vain. At last he found the right man, who told him he had been eating too much saccharine and amylaceous matter, and was wise enough to specify what articles he should abstain from. His dietary plan was as follows:—

"For breakfast, I take four or five ounces of beef, mutton, kidneys, broiled fish, bacon, or cold meat of any kind except pork; a large cup of tea (without milk or sugar), a little biscuit, or one ounce of dry toast.

"For dinner, five or six ounces of any fish except salmon, any meat except pork, any vegetable except potato, one ounce of dry toast, fruit out of a pudding, any kind of poultry or game, and two or three glasses of good claret, sherry or Madeira—champagne, port and beer forbidden.

"For tea, two or three ounces of fruit, a rusk or two, and a cup of tea without milk or sugar.

"For supper, three or four ounces of meat or fish, similar to dinner, with a glass or two of claret.

"For nightcap, if required, a tumbler of grog—(gin, whiskey or brandy, without sugar)—or a glass or two of claret or sherry.

"This plan leads to an excellent night's rest, with from six to eight hours' sound sleep. The dry toast or rusk may have a tablespoonful of spirit to soften it, which will prove acceptable. Perhaps I did not wholly escape starchy or saccharine matter, but scrupulously avoided those beans, such as milk, sugar, beer, butter, &c., which were known to contain them.

"On rising in the morning, I take a tablespoonful of a special corrective cordial, which may be called the Balm of Life, in a wineglass of water, a most grateful draught, as it seems to carry away all the dregs left in the stomach after digestion, but is not aperient; then I take 5 or 6 ounces of solid and 8 of liquid for breakfast; 3 ounces of solid and 8 of liquid for dinner; 3 ounces of solid and 8 of liquid for tea; 4 ounces of solid and 6 of liquid for supper, and the grog afterwards, if I please. I am not, however, strictly limited to any quantity at either meal, so that the nature of the food is rigidly adhered to."

The result of this treatment we will give in his own words:—

"I have not felt so well as now for the last twenty years. Have suffered no inconvenience whatever in the probational remedy. Am reduced many inches in bulk, and 35 pounds in weight in thirty-eight weeks. Come down stairs forward naturally, with perfect ease. Go up stairs and take ordinary exercise freely, without the slightest inconvenience. Can perform every necessary office for myself. The umbilical rupture is greatly ameliorated, and gives me no anxiety. My sight is restored—my hearing improved. My other bodily ailments are ameliorated—indeed almost passed into matter of history."

Later still, at the end of the year, his weight was reduced 46 lbs.

and his girth 12¼ inches, and thus he expresseth his gratitude and thanksgiving:—

"It is simply miraculous, and I am thankful to Almighty Providence for directing me, through an extraordinary chance, to the care of a man who could work such a change in so short a time. Oh! that the faculty would look deeper into and make themselves better acquainted with the crying evil of obesity—that dreadful tormenting parasite on health and comfort. Their fellow men might not descend into early premature graves, as I believe many do, from what is termed apoplexy, and certainly would not, during their sojourn on earth, endure so much bodily and consequently mental infirmity. . . . . Most thankful to Almighty Providence for mercies received, and determined to press the case into public notice as a token of gratitude."

Since the publication of his pamphlet,* Mr. Banting has become a famous man, and his system is now the fashion, not only in England, the land of gross feeders, but even in the rarefied air of New England, where a fat man is seldom seen. There is nothing new in this method; it has simply been applied in an individual instance and made notorious. It is the single case which the public always does jump at, without regard to general principles or consequences, and Bantingism will unquestionably be popular for a time among fat men and women. It will undoubtedly in most cases produce the desired effect, so long as it is faithfully followed, and so far it may be considered a success, but there is another point to be regarded, which may not suggest itself to its disciples, viz., how far it is a safe method. Nature did not fill her cereals, fruits and edible bulbs with starch and sugar, nor her milk with sugar and fat, for no purpose. These elements play an important rôle in the animal economy, and although their use in excess may more than fulfil the desired object and cause their products to be accumulated to the temporary inconvenience of the individual, complete abstinence from them must lead to serious results. We would caution the obese, therefore, against any such experimentation without first consulting their physician. Mr. Banting's end is not yet, for he has given us the experience only of months. He may yet write an equally pathetic confession in the character of Cassius, and sigh that he is no more a Falstaff. We commend to the notice of the votaries of Bantingism the following judicious remarks of Dr. Radcliffe upon this subject, before the recent meeting of the British Medical Association, in the London *Medical Times and Gazette*:—

"Mr. Banting's rule is to take abundance of lean meat, claret, sherry, Madeira and tea, and to abstain as much as possible from bread, butter, milk, sugar, beer, and potatoes—articles containing starch and saccharine matter—to abstain as much as possible from the articles upon which Mr. Banting had lived almost exclusively in the days when he was a victim to obesity. The diet in Bantingism, indeed, is essentially the same as that prescribed in training for the ring or for the boat race. The chief peculiarity in each case is to allow a large amount of lean meat, and if there be any difference it is that the Bantingist deals more liberally with himself in this respect than the athlete. What Mr. Banting allows himself is rather more than is eaten by the averaged-sized man in training. It may be expected, therefore, that the known results of the process of training may throw some light upon some of the consequences of Bantingism. It may be expected that Bantingism cannot be carried beyond a certain point with advantage. In training this is certainly the case, for after a certain time, longer or shorter as the case may be, after within four months at the longest, the person in training rapidly gets "out of condition." Nor is it otherwise with Bantingism; at any rate, Dr. Radcliffe says that he has met with several persons who, after trying Bantingism for a while with no disadvantage, have thus got "out of condition" in an unmistakable manner, some of them becoming very gouty, and all of them experiencing a decided failure in strength and spirits.

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* Letter on Corpulence. Mohun, Ebbs and Hough. New York.

"Dr. Radcliffe is disposed to look upon this loss of "condition" in these two cases of training and Bantingism as depending partly upon excess of nitrogenized food, and partly upon deficiency of fatty matter. The nitrogen of the food escapes in the main by the kidney as urea or uric acid, and if the kidney be not up to the work the system is apt to become gouty from the accumulation of these products in the blood. Hence it is not difficult to see how excess of nitrogenized food may, sooner or later, lead to ill health, and that especially in the case in which a proper amount of exercise is neglected. Nor is it difficult to see how deficiency of fatty matter may tend to bring about the same result, if, as Dr. Radcliffe supposes, a certain quantity of fatty matter be necessary to the proper nourishment of nerve-tissue. It is not difficult to see that nerve-tissue, which contains a large quantity fat, may be starved if the food do not contain a sufficient quantity of fat, and that this starving of the tissue may involve a corresponding want of nervous energy. At any rate, Dr. Radcliffe is disposed to look upon the diet in training and in Bantingism as calculated to nourish the muscles rather than the nerves, and he believes that this may be one reason why prize-fighters, like Heenan, have often been so seriously wanting in the power of sustained action, and why the followers of Mr. Banting have after a while begun to flag in the spirit which animated them at first.

"In a word, Dr. Radcliffe considers that it is not safe to ignore the old standards of food so completely as is done in Bantingism. He thinks that milk and bread are still typical articles of food. He gave reasons for believing that the farinaceous, and saccharine, and oily articles of food are, in proper proportion, not to be dispensed with without risk, inasmuch as they are the most suitable fuel for keeping up the heat of the human body at the proper point; and he gave reasons also for doubting whether saccharine and farinaceous matters in excess have the same tendency to favor the formation of fat as oily matters in excess. He is of opinion that certain persons may incline to the type of vegetable feeders rather than to the type of animal feeders, and that these persons may find the nitrogenized part of their food better in the albumen, fibrine, and caseine of vegetables than in the albumen, fibrine, and caseine of animals."

THE LATE DR. SILAS BROWN.—Died, in Wilmington, Mass., Sept. 15, 1864, Dr. Silas Brown, aged 84 years and 10 months.

Dr. Brown was born in Tewksbury, Mass., in 1779; received his academic education at Phillips Academy in Andover, and studied medicine with Dr. Thomas Kittredge, of the same town. He began his professional labors at 21 years of age, in Kittery, Me., where he resided nine years, when, in consequence of failing health, he removed to Methuen, Mass. After a residence of eight years in this place, he removed to Wilmington, where he resided until his death, a period of forty-six years. He was admitted to the Mass. Medical Society in 1821, and remained an active member until his age entitled him to become a retired member, in accordance with the rules of the Society. During the long period of sixty-three years, from the time he commenced practice in Maine until his death, as his health would permit, he was ready to respond to the call of distress ; his last visit, as medical adviser, being to a neighbor during the past summer.

Agriculture had been a theme of much pleasure to him for many years. His contributions to the *Boston Cultivator* and *New England Farmer*, for nearly twenty years past, may be found in the files of those papers.

He has lived a long and useful life, retaining his faculties to the last, and has now been "gathered to his fathers" "like a shock of corn fully ripe." B.

Foreign Intelligence.—Prof. Hyrtl has been chosen Rector Magnificus of the Vienna University for the coming year.

Prof. Scanzoni is about to leave Bavaria and take up his residence in Baden-Baden.

Prof. Langenbeck has been elevated to the rank of the nobility for his services in the late Schleswig-Holstein war.

A severe case of strychnia-poisoning is reported to have been cured by the use of worara in Königsberg.

At the last meeting of the Académie des Sciences, M. Wöhler, of Göttingen, was elected foreign associate in place of the late Prof. Mitscherlich. The other candidates were De la Rive, Geneva ; Agassiz, Boston ; Airy, Greenwich ; Bunsen, Heidelberg ; Hamilton, Edinburg ; Martius, Munich ; Murchison, London ; and Struve, Pultava.

In a letter from Paris appearing in the *Wien. Med. Woch.*, it is stated that there are about twenty Germans practising in Paris, some of them enjoying a first-rate celebrity. The liberality with which all obstacles have been foregone by the French Government and Faculty is in striking contrast to what prevails in Vienna, where even the diplomas of different Universities of the same empire are not acknowledged as giving a right to practise. Among the German practitioners in Paris, the names of Gruby, Liebreich, Mandl, Meding, Sichel, and others are widely known. *Gruby* was a poor student at Vienna, who labored diligently under Hyrtl, Rokitansky, and other able professors, and he would probably have settled in his place of education, but being a Jew, all posts were denied him by Austrian intolerance. He therefore went to Paris, where he has acquired fame both as a teacher and practitioner. In the latter capacity his views are narrow enough, ignoring the maxims of medical science, and professing to treat disease solely by regimen. Still he is in enormous repute, his consultation room being crowded all day, chiefly with hysterical women, who often send their servants before hand to secure their turns. Gruby is a very different man among his anatomical and chemical preparations at his laboratory at Montmatre, and his hospitality to foreign visitors is boundless. *Liebreich*, the former assistant of Von Graefe, at Berlin, has advanced far more rapidly than most practitioners at Paris. He has established an ophthalmic clinic, with sixteen beds and Dispensary, in the Quartier Latin; and here he not only sees the poor gratuitously, but gives the five-franc consultations to those of slender means in an adjoining room. This clinic is amply supplied with patients, and foreign physicians from all parts of the world flock to his lectures. His ophthalmoscopic demonstrations are skilfully performed, and he is always ready to enter into explanations. In the afternoon, the richly decorated waiting-room of his residence in the Champs Elyseés is frequented by rich and fashionable patients; for, combining most polished manners with profound knowledge of his specialty, he has acquired a large practice in a remarkably short time. Mandl also enjoys a good reputation both as teacher and practitioner, the laryngoscope especially of late occupying his attention. With a good consultation practice, and his Dispensary in the Quartier Latin, he yet finds time for the scientific pursuits which have given him an European reputation. Besides Liebreich, there are three other pupils of Von Graefe who are making their way in Paris as oculists, and Von Graefe himself always passes a month every year in that capital, during which he of course sees many patients. A Dr. Lowenberg, a pupil of the celebrated Poltzer, has also established himself as an aurist in Paris, and founded a clinic for diseases of the ear.—*Med. Times and Gazette.*

REPRINT OF THE LONDON LANCET.—The English edition of the *Lancet* being now almost excluded from this country by heavy duties and rates of exchange, the American reprint of it must be more valued than ever. It is published in New York by Mr. J. Herald at $5 per annum. Any one wishing to subscribe for it in connection with the Boston Medical and Surgical Journal, may receive the two works, as published, by addressing the publishers of the latter, at the rate of $7.50 per annum, in advance.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 24th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	57	41	98
Ave. mortality of corresponding weeks for ten years, 1853—1863,	49.6	45.0	94.6
Average corrected to increased population	00	00	104.0
Death of persons above 90	0	0	0

DIED,—At Somerville, 24th inst., Dr. George Bartlett, of Boston, aged 57 years.

DEATHS IN BOSTON for the week ending Saturday noon, Sept. 24th, 98. Males, 57—Females, 41.—Accident, 3—apoplexy, 2—disease of the brain, 4—inflammation of the brain-1—bronchocele, 1—cancer, 1—cholera infantum, 4—cholera morbus, 1—colic, 1—consumption, 18—convulsions, 4—croup, 4—diarrhœa, 12—diphtheria, 4—dropsy, 2—dropsy of the brain, 3—dysentery, 5—erysipelas, 1—scarlet fever, 2—typhoid fever, 2—typhus fever, 1—hæmatemesis, 1—disease of the heart, 1—indigestion, 1—infantile disease, 3—insanity, 1—disease of the kidneys, 1—disease of the liver, 3—congestion of the lungs, 1—inflammation of the lungs, 2—marasmus, 2—old age, 1—paralysis, 1—puerperal disease, 1—scrofula, 1—smallpox, 1—inflammation of the throat, 1.

Under 5 years of age, 45—between 5 and 20 years, 10—between 20 and 40 years, 24—between 40 and 60 years, 14—above 60 years, 5. Born in the United States, 71—Ireland, 21—other places, 6.

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PHAGEDÆNA.

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It is not very probable that the true cause of this disease will ever be definitely known; and in the absence of clearly proved and incontrovertible facts which would establish its real nature, it matters little how opinion falls into line for, or against any special theory. However, enough has been ascertained to prove that the most favorable *conditions* for its development are to be found in a badly kept, badly ventilated ward, crowded with wounded soldiers; and but for its occasional occurrence in outside patients, and in the clean wounds in finely conducted wards, where filth and foul air have no place, the mystery enshrouding its birth would not appear so profound. Under this shadow we will have to leave the secret of its creation, submitting to be consoled for unrewarded research by the pleasant reflection that we are always able to identify the invader, and to bring powerful and efficient means for its destruction. Hideous, foul and terribly destructive as is phagedæna when left to itself, or improperly treated, yet there is no severe malady wherein remedial interference is followed so rapidly by such astounding improvement. One great element of success over older practice is the great superiority of hospital hygiene at the present day, rendering the great majority of cases more mild and controllable. Timely interference has much to do in the per cent. of recoveries.

Symptoms.—There are three symptoms which attend every stage of phagedæna, by which it can always be easily recognized; viz., *a quick pulse*—extremely rapid in grave cases—*ulceration*, and *a foul, sickening odor.* It ought never to be confounded with any other disease. It has been my lot, however, to have seen some of the most frightful though beautifully characteristic cases occurring in private practice confounded with phlegmonous erysipelas—a thing unpardonable, inasmuch as the recollection of a single circumstance will always be sufficient to separate these diseases, viz., that in phlegmonous erysipelas there is *immense swelling, heat and tension of the parts before* suppuration and sloughing set in.

The "quick pulse"—beginning with the symptoms in the order they are named—is, as far as my observations have extended, the result of the local ulceration and infection, though both may be present in the morning, having taken possession of the patient some time in the night, when it is hard to say which had the precedence. Cases of this description have occasionally come under my observation; however, I am inclined to the opinion that in these cases the wound had not been carefully examined the evening before, when, if not a minute slough, at least a *bad odor* would have been detected. At times the wound will have a very disagreeable smell, though *well dressed,* for several days before any local or constitutional symptoms of phagedæna manifest themselves; and this unpleasant fœtor will not leave a wound when invaded by this malady, till the diseased action be *entirely destroyed.* As the disease advances, the pulse increases in frequency, hardly ever being less than 130 or 140 to the minute, and generally, in bad cases, as high as 160 and 170. If not very high, the patient is not very badly attacked, or only in the initiatory stage. With this pulse there is a peculiar hot and unpleasant skin; it rarely appears moist and relaxed. When this occurs after a vigorous local treatment, it is always a good augury, as the pulse soon falls to nearly a natural beat, when the patient becomes finely convalescent.

When the case terminates fatally, life is extinguished by asthenia. Towards the last, diarrhœa sets in, and the poor *nervous, tremulous* invalid, whose every feature has undergone some sharpening by incessant pain and sad apprehension, equalled only by the *shaking palsy* which has long since seized on all his frame, passes into the wanderings of fitful delirium, when death finally terminates the struggle, in the midst of more or less complete abolition of the senses. But he will not die as soon as is expected. These cases have a terrible habit of holding out long after they have become hopeless.

Ulceration.—This is peculiar, and comprises two grades, or modifications of ulcerative action; viz., *molecular* death, or ulcerative absorption, which is chronic in its course in comparison with the other, and affects only the integument, connective tissue and muscular aponeurosis of a part or limb; the other is somatic death, or mortification suddenly attacking the entire tissues of a "stump," or adjoining structures in other injuries, particularly in "gun-shot wounds," where an immense surface, or the entire extent, may become sloughy in a single night. This is popularly known as "hospital gangrene." It is most apt to occur in the flaps just after amputation in unhealthy or *diseased* wards; perhaps affecting only a corner of one flap, or involving portions of both, thence extending up to the stump, where it may halt after destroying only its covering, or continue up the limb, committing fearful ravages till life becomes extinct. It is seldom that it quits a part *of its own accord.* Then, again, it may invade the tender granulations of a stump when it has almost recovered from the amputation, or is making beautiful advances, and open it all up again. Their causes are the same, only the latter is not of such frequent occurrence as formerly, owing, as I have already had occasion to remark, to the superior hygiene of the present day, which tames its ferocity. The simple ulcerative form is the one which will command nearly the entire attention. If it invades the granulations of a stump, the appearance of the ulcer differs somewhat from the one which is developed along the continuity of a limb, whether the orifice of entrance or exit of a musket ball or other projectile be the point of explosion or not. Such an event is announced by one or more points of soft, semifluid, yellowish, dirty slough, which is generally very well outlined on the field of granulations.

In the course of a few hours, if nothing be done to prevent it, the whole wound will have disappeared beneath this foul marsh. When attempt is made to remove it with sponge and water, part of it will smear the sponge, whilst the deeper portions will be found to be more firm and tenacious. It may be soft and friable under the fingers, or firm and dense nearly as fibrous structure; this is more apt to be the case in the very chronic forms of the disease, and particularly noticeable near the joints. As the ulcerative action advances, it may gradually consume the entire soft structures in the vicinity, the integument, slower in giving up, becoming much everted, whilst the segment of the bony structure, covered with scarlet granulations, juts out from the base of the disease; or after consuming portions of the muscles, it may presently abandon them, to devote its entire attention to the muscular sheaths, the areolar tissue and integument. When it presents in a breach of integumental continuity it affects primarily the superficial fascia and integument, creating abrupt and precipitous edges, which as they advance observe nearly a circular form. These edges are inflamed, red and swelled. If pressure be made upon them, thick fœtid matter will well out; they are undermined to some extent, varying at different points. Presently the ulcerative action will have penetrated the fibrous aponeurosis of the muscles, dipping down between them to remove the areolar tissue, when they have a *clean, red, isolated* appearance; they are covered with granulations, which secrete no pus. When the dressings are being removed, a thick, ropy, mucous-looking secretion will sometimes, particularly when stimulants have been used, swag down in strings into the basin. As the disease advances, the bony skeleton is reached, and the rest of the limb *below* the ulcer becomes œdematous from the interrupted venous return, because of *solution of the veins.*

This form is sometimes idiopathic, particularly in the old, when it is terribly ravenous. I once saw a case in a tall female of nearly fifty, where the integument and fasciæ had been consumed and the muscles stripped of their investments as high up as the thigh. She died some days afterwards. It commenced on the dorsum of the foot in the form of a large vesicle with a red base, which presently gave way, when destructive action set in. It will hardly be believed when I make mention that the attending physician called it erysipelas. The mephitic odor was very conspicuous.

I also remember a frightful instance of this disease in a farmer of upwards of fifty years; he was of medium size, and had previously enjoyed very good health. This also was preceded by an inflamed vesicle, which rose on the dorsum of the right hand. All integument, fibrous expansion and connective tissue had disappeared as high up as the middle of the deltoid muscle externally, whilst internally the interior border of the latissimus dorsi stood out red and naked. The brachial artery, with its ulnar and radial branches, hung down from the axilla like a rope, and was only kept in place by the muscular and articular branches that had remained entire. He also died; *all* such cases die. Let it be well understood that in these cases the tissues disappeared by *ulcerative absorption*. When the causative power becomes intensified, then *sloughing* sets in.

It is a most singular circumstance, that when amputation is had recourse to it occasionally substitutes the latter procedure, so that when the stump is uncovered to change the dressing the flaps are found cold and of a greenish livid color; it is hospital gangrene, and the case is now desperate: he rarely recovers.

The *last* of the symptoms, that of "foul odor," has already been much adverted to, and I am only tempted to allude to it again in connection with deep penetrating wounds, where it is of signal importance. Here we can see nothing that is going on, as the ulcerative action is far out of sight, and both the patient and medical attendant are sadly deceived. If active remedial measures be not immediately instituted, the patients *all die*. If a patient be found, several days after the infliction of deep gun-shot injury, with a quick pulse, and a *foul discharge*, whatever be its origin, phagedænic, erysipelatous or what not; if the entire track will not admit of opening up, or thorough cleansing to prepare it for an application which will destroy the putrescent tissues along the entire track, the case is a most forlorn one. It requires a bold hand to save these cases.

Treatment.—When this disease breaks out in a ward, it should be *immediately* cleared out—renovated—leaving the whole premises for the phagedænic cases only; and if these be many, or severe, it would be highly proper to remove some. They do well in tents, especially when there are not more than three or four to a tent, and I would respectfully recommend to the profession that this procedure be adopted whenever the tents can be obtained. Each case must be furnished with *a separate nurse, basin and sponges.* Community of dressings *must* be avoided by all means, and the nurses must be *con-*

stantly reminded of this fact. The sponges must be well cleansed every time with soap and water, and then scalded with hot water. After they have been used a while, it is *safest* to throw them away, making use of fresh ones.

The red-hot iron, as an application for the treatment of this disease, is still much in vogue in the Isles and on the Continent. In the form of the tinner's soldering iron, reduced to the size of an ounce weight, or expanded in acorn-like shape, it can be made to touch the bottom of every crevice, excavation and irregularity of the ulcers. It is an effectual remedy, *but by far too severe.* Enough of the tissues are very generally destroyed already to render recovery or deformity hazardous, and it is therefore highly important that, if found equally efficacious, a more conservative course should be adopted.

The treatment by fuming nitric acid is gaining many powerful friends both in Europe and America, and it is beyond a doubt a most excellent remedy; yet *it also creates too deep a slough.* It is applied by means of small pieces of sponge saturated with the acid, and firmly pressed over the surface and edges of the ulcer, previously well dried. Diluted with one third water, it answers much better.

In this country, bromine has suddenly taken a high position through the recommendation of Dr. Goldsborough. It is not liable to the same objections as the other methods, for it is followed by a *very thin* eschar; its remedial powers in this disease are also highly flattering. Yet it must be confessed, if only for the sake of the *uninitiated,* that it is decidedly the *meanest* and most *offensive* article ever recommended to the profession, inflicting great punishment upon the party attempting to apply it. The moment a vial is unstoppered the surgeon's head is enveloped in a dense red cloud of suffocating fumes arising from the highly volatile liquid. Use either a small glass syringe, or a bit of sponge, or any other vehicle, still you cannot escape this punishment. Then another objection is, that it has such avidity for the tissues, spreading over them in such wild haste as to require great manipulative care to keep it within legitimate bounds. I have seen the hip and thigh denuded and deeply ulcerated over a space larger than a dinner plate, *caused*, it was averred, by the fumes alone, confined by the oiled silk which is generally used as a part of the immediate after-dressing. This deplorable case is sufficient in itself to show that great caution should be exercised in its application. Owing to the above reasons, I have discontinued its use.

In lieu of the rehearsed practice in general use, I take great pleasure in commending to the favorable notice of medical men, an article commonly known as "aqua regia," or "nitro-muriatic acid," against which nothing can be said, and over which no remedial agent that I have yet tried can justly be lauded, either as a more *safe* or *effective* remedy in arresting phagedænic ulceration. It does not require an expert to use it, whilst the slough it creates scarcely amounts to a pellicle, which when detached exposes a granulating surface of surpassing beauty and reparative powers. I have had such immense success with this practice, that I am almost tempted to say, in the event of a failure after its use, that it would be solely owing to a want of *thorough application.* To do this, all the deep grooves, canals and sinues of the ragged ulcerative tissues should be well *opened up* and *most vigorously sponged* and *dried out.* The undermined integument should be cut through with a pair of sharp scissors at different points of the circumferential line, and well up against the connective tissues, so that it may be turned over like a cuff and well cleansed. After these precautionary steps, which are never to be omitted, the case is ready for the reception of the acid. To do this with facility, a half dozen small pieces of sponge, a polypus forceps, and a small saucer containing the aqua regia *just made,* should be ready for the surgeon the moment he has finished drying the wound, else it will again become humid and thus weaken the acid or compromise its efficiency. The ulcer should be gone over again and again with a fresh sponge newly dipped into the acid, till it becomes dry throughout its entire extent. Lint should now be placed in the wound, and kept moist with alcoholic or stimulating lotions, changing the lint twice a day.

The following are very good medications:—℞. Pulv. opii, ℥ ss.; creasoti, ʒ ij.; spts. frumenti, Oij. M.; or, ℞. Acid. muriat., ℥ i; sodæ chlorinat., ℥ ij.; aquæ, Oiss. M., will be found to answer extremely well. These cases should have tonics and be well fed; in fact, they make a vast change in the course of twenty-four hours after completely recovering from the effects of the chloroform, so that they lose their previous anorexia and acquire a very good appetite. Porter and nourishing food will hurry them into vigorous convalescence.

In regard to the treatment to be adopted in the form of rapidly extending mortification, or acute hospital gangrene, little can be said by way of commendation. I have amputated four times in this hideous form of the malady, and lost three of my patients; two from recurrence in the stump, the other by pyæmia. The case of recovery happened in an old fat minister, who was a private patient. Still, if the patient had sufficient strength to rally from the shock of the amputation, I would have courage to use the knife again, if it carried with it only a forlorn hope. If it be not too large a surface, I believe it would be good practice to completely excise the parts till blood flow from every portion of the wound, then burn it with red hot iron, or other powerful caustic.

The low ulcerative action which sets up in long or deep sinuous wounds, has already been alluded to. They should be *boldly opened up* with a bistoury and treated with acid; otherwise the patients are very apt to die—die in spite of iron, quinine and whiskey.

Washington City, Sept. 22d, 1864. W. H. Triplett.

DR. GAILLARD'S PRIZE ESSAY ON OZONE; ITS RELATIONS TO HEALTH AND DISEASE.

[Continued from page 181.]

We see thus that, by the simple process of ebullition, any *possible* preparation of nitric acid can be made to acquire this prescribed specific gravity; the strong acids rise to it, and to it the weak acids fall. There can, then, be no difficulty in regard to the acid. We have, then, iodide of potassium pure; nitric acid of exactly 1.42 specific gravity; and distilled water. Distilled water, for this purpose, should be pure; and to secure this, it should be tested. Pure distilled water should be transparent and colorless; it should not smell or taste of burnt oil; it should not change the color of blue or red litmus paper. When slowly evaporated to dryness, in a platinum or glass capsule, it should leave no solid residue. It should not become turbid, when tested, separately, with solutions of nitrate of silver, nitrate of barytes or oxalate of ammonia. It should be recollected that rain water, as containing nitric acid, should not be used as a substitute.

With a perfectly pure preparation of the iodide of potassium, with nitric acid of specific gravity 1·42, and with pure distilled water, we have the materials for constructing an ozonometer, securing all the necessary qualifications now desired. The first step, in this process, is to prepare a substitute for an ozonized atmosphere, and, in this, acid must play the part of ozone:—℞. Aquæ dist., f ʒ vij.; acid. nitric. (1·42), f ʒ ss. Misce. Each quarter drachm, or fifteen minims, of this mixture will contain one minim of nitric acid. Into each of ten (10) clean glass vessels (wineglasses), pour one fluidounce of pure distilled water. Of the mixture of acid and water, just prepared, pour into the

1st glass - - -	10 minims	6th glass - - -	35 minims
2d " - - - -	15 "	7th " - - -	40 "
3d " - - - -	20 "	8th " - - -	45 "
4th " - - -	25 "	9th " - - -	50 "
5th " - - -	30 "	10th " - - -	55 "

It will be observed that each of these glasses represents the atmosphere, in a certain ozonic condition; for the solution, in each glass, will produce the same change in an ozonoscope, as would an atmosphere containing a corresponding amount of ozone. Each glass, then, represents an atmosphere containing a certain amount of ozone, and each glass shows the relative action of such an atmosphere upon the ozonoscope. A perfect white being the zero of the ozonometer, the glass containing ten minims of acid and water in the solution represents an atmosphere which would, in an ozonoscope, produce a color indicated by the degree 1 (one) on the ozonometer—and so, respectively, with the other glasses; the last, containing fifty-five minims of acid and water in the solution, representing an atmosphere which would, to the ozonoscope, give hue or degree 10 (ten) of the ozonometer.

Into each of these glasses, plunge an ozonoscope of cotton cloth, prepared as before mentioned. Each ozonoscope may be of any convenient dimensions; three inches long and one inch wide will answer. Allow them to remain fifteen minutes *each,* and removing them in order, place them away to dry. These ozonoscopes should be numbered, to correspond with the glasses in which they are placed. It is best that *only one at a time* should be used, and the entire process with this completed before another is attempted. As the hue of the ozonoscope is not permanent, it is necessary that the hue resulting from the action of the acidulated water, should be *immediately* transferred to paper. A few minutes before making this transfer of the hue to paper, the ozonoscope, about being so imitated, should be slightly dampened with a little *distilled water.* In making this chromatic imitation of the ozonoscopes, the same pigments should be adopted, as are now used in making this division arbitrarily; Prussian blue, neutral tint, India ink, &c. Any ordinary painter, or person of common ingenuity, will easily and readily succeed in making a perfect imitation of these ozonoscopes. It is certainly more easy to *imitate* these colors, than to *create* them, and instead of making a rude and inaccurate division of the chromatic interval, from white to blue, we have, in this series of imitations, a uniform and perfect ozonometer. We have not to *make* the chromatic divisions, for this is already done; we have not to *create* a chromatic degree, but are only called upon to *imitate* one. The only possible obstacle, in the formation of this ozonometer, is the imitation of the chromatic tints of the ozonoscopes; and *if* this prove an obstacle, how would it be exaggerated and increased, if, in place of *imitating* these hues, we had to first *create* them, and then to establish a *uniform* scale of degrees between them. It should be recollected, that it removes entirely all the uncertainties and dissimilarities which characterize the present ozonometers, and transforms the difficulties of *chromatic creation,* to those which *may* attend those of *chromatic imitation.* Such as it is, however, it is offered for consideration and we hope for adoption.

There need be no prescribed form or size for this ozonometer, but it will be found convenient to have the degrees, or chromatic divisions, as delineated on paper, about four inches long and one inch wide; the first division being marked 1, the second division 2—and so on, until the degrees are all completed—zero being white. It should be observed here, that a given amount of ozone, or any acid, produces a greater effect on the ozonoscope, when this is dampened, than if it were dry. The ozonoscopes placed in the glasses are therefore more deeply colored, than if the same amount of acidity acted upon them in a dry condition; though the hues actually produced, correspond in intensity with the hues that are actually produced by atmospheric ozone.

It is necessary that, in the use of the ozonoscope, it should be dampened both at the commencement and close of each experiment. The ozonoscopes moved by clock work, are kept always dampened by capillary action, or some other simple method. We here annex a few specimens cut from the ozonoscopes, illustrating the condition of the atmosphere at various places upon this continent. (Owing to the peculiar tints required, they cannot be given by letter-press.)

The ozonoscopes should be dampened with a little *distilled* water. It will be observed, that the condition of atmospheres, so near each other, is often, at the same time, very dissimilar.

There are some peculiarities which should be observed, in exposing ozonoscopes; as otherwise the results obtained and the deductions from them will be erroneous. We will state these as concisely as possible. The ozonoscope should be dampened at the commencement and close of each experiment or observation; it should not be placed where it would be affected by ammoniacal gases; all alkalies destroy the color of the blue iodide of starch. After a thunder storm, in consequence of traces of nitric acid in the atmosphere, the ozonoscope manifests a deep blue color; allowance should always be made for this. The ozonoscope should not be exposed to a strong current of air or wind, as this produces a sensible evaporation of the iodide of starch. When exposed at great height in the atmosphere, as on a steeple, there will be a very slightly deeper color than when exposed on the ground, at the same locality. Height gives a relative increase in the amount of ozone. Lastly, the ozonoscope should not be exposed in a chamber, or room occupied at any time during the twenty-four hours; for the circumstances attending habitation influence the formation of ozone and tend to its destruction. The meteorological relations of ozone have received close investigation, but without going into the details, specially interesting only to those making this their study, we will briefly state the results.

Winds influence ozone, according to the quarter from which they come. In America, according to careful investigation, Easterly and Southerly winds are attended with an increase of ozone; Westerly and Northerly winds seem to have no uniform, or decided effect. In Europe, Westerly winds (as coming from the sea), always coincide with our increase in the amount of atmospheric ozone. Rain, hail and snow are marked by an increase of ozone; extreme cold also produces a similar effect. Dry air is unfavorable to the formation and existence of ozone; damp air exerts a contrary effect. Bœckel observes, that the rapid formation of vapor is attended with an increase of atmospheric ozone. Sunlight is a prime necessity in its formation. Temperature has its effect: as cold is favorable to the formation of ozone, so heat is inimical to its existence; at the degree of heat, before specified (268 F.), ozone is entirely destroyed.

These brief facts on this subject, compiled from a mass of tables and statistics, exhibit all that is certainly known of the meteorological relations of ozone. It is not yet finally determined at what period of the twenty-four hours the maxima and minima of ozone are exhibited. Boeckel, one of the best European authorities, states that, in summer, the ozonometric mean is greatest in the day; the ozonoscope being, in the day, exposed to two maxima of electricity. European writers on this subject are divided in their opinions and views; the law has yet to be established. Dr. Smallwood, of Montreal, concludes "that the ozonic periods correspond, in a striking degree, to the bi-daily variations of atmospheric humidity." The same authority quite recently suggests that "there are certain hours of increase and decrease, corresponding to the bi-daily variations of the barometer, and apparently with the variations of atmospheric electricity."—(Autograph letter, 1861.) Statistics alone, based on good and uniform instruments, can establish the law.

[To be continued.]

ON THE ARSENIC-EATERS OF STYRIA.

By Craig Maclagan, M.D., Edinburgh.

In the spring of this year, at the conclusion of a short residence in Vienna, I resolved to visit Italy, and finding that my route led me through Styria, I thought it might be interesting to endeavor, by personal inquiry, to gain some information as to the reputed arsenic-eaters of that country; and as my travelling companion, Dr. Joseph Rutter, of London, was also professionally interested in the question of their existence, we determined to make a short stay at Gratz, the capital of the duchy, and thence to make any excursions into the country, which the knowledge I might acquire should point out as necessary.

My object in the present paper is succinctly to narrate what I learned by actual observation; but before doing so I may be permitted to glance rapidly at the existing condition of our information on the subject.

Although medico-legal observations on this practice had already been made so early as between 1817 and 1820 (Professor Schallgruber, *Medecin-Jahrbuch des Oestreich. Staates*, 1822) in Gratz, the first time that any great interest was manifested in Britain on the subject seems to have been when a paper by Dr. Von Tschudi, which had originally been published in one of the Viennese medical journals (*Wiener Medicinische Wochenschrift*, October 11, 1851), appeared in an English dress, and found its way into many of the popular as well as scientific publications of the time, including Chambers's Journal, and the late Professor Johnston of Durham's Chemistry of Common Life.

The embellishments which Von Tschudi's narrative received from other writers, as well as the apparently incredible nature of the original statement, caused it to become a subject of much discussion.

The general opinion of scientific men in this country was, that the statements of Von Tschudi were not worthy of belief, and this view of the subject was specially maintained by Mr. Kesteven, of London, in a series of papers which appeared in the Association Medical Journal for 1856, in which he quotes the opinions of the most celebrated toxicologists of the time, in confirmation of his own disbelief in the practice.

Careful inquiry, however, was set on foot by other scientific men, both British and Austrian. Mr. Heisch, of the Middlesex Hospital, having put himself in communication with persons living in the districts where the practice existed, was enabled to quote several very interesting cases, which were very thoroughly authenticated (*Pharmaceutical Journal*, 1859–60, p. 556), and Dr. Von Vest, the Landesmedicinalrath for Styria, residing in Gratz, having issued a circular to the medical men in his district, asking for information on the subject, was enabled also to arrive at tolerably satisfactory proof of the existence of the custom. The most interesting example of it was communicated to him by Dr. Knappe, then residing at Oberzeiring, in Upper Styria, who had persuaded an "arsenikophagite" to come and live under his observation for a few days, and who not only was thus enabled to see the man take his dose, but was enabled to transmit to Dr. Schäfer, a practical chemist in the Styrian capital, a specimen of the urine passed after the ingestion of the drug, and which was proved to contain it.

The facts ascertained by Knappe were made known in Britain, by a paper by Dr. Roscoe, read to the Manchester Philosophical Society, and published in the Mechanics' Magazine; and the existence of the practice has been admitted by some scientific men who have written since the date of Roscoe's paper. Dr. Guy (*Forensic Medicine*, 2d Edit., p. 368) admits that Roscoe has brought forward "conclusive evidence" of the fact; but from its being denounced as incredible in most of our standard works which have occasion to treat of the subject, such as those of Taylor and Pereira, and from its having been strongly denied in some important criminal trials, as by Dr. Christison in the case of Wooler (*Edinburgh Monthly Journal*, 1855–56, pp. 709, 710); whilst Roscoe's valuable paper appears not to be sufficiently known, it seems to be the general belief in this country that there is no foundation in fact for the alleged arsenic-eating in Styria.

What seemed to result from the inquiries of Von Tschudi, Knappe and Heisch, was this:—

I. That in various parts of Styria and the adjoining countries certain individuals were in the habit of swallowing daily, or twice or thrice a week, or at longer intervals, a certain quantity of a mineral substance, called "*Hüttereich*,"* for various purposes, such as the improvement of the appearance, the rendering more easy the respiration during mountain climbing, as a condiment, as a tonic and stimulant, as a prophylactic against disease, and as a preservative of health; and that this so-called Hüttereich was arsenic.

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* I use the spelling adopted by Dr. Macher in his Medizinisch-statistische Topografie Steiermarks. Although the pronunciation of the Styrians makes it Hütrach, it it obvious that the word really is Hütten-rauch—literally, furnace smoke or vapor.

II. That these individuals became, through custom, capable of taking doses of arsenic varying from one grain to several grains daily.

III. That its more immediate effect on the system was to make them lively, combative, and of strong sexual desire. This latter physiological effect may perhaps be held to be indirectly proved by the inordinate number of illegitimate children in some of these places, the proportion sometimes rising nearly as high as 60 per cent. of the total births.

Against all this was to be placed—

I. The experience of medical men in other countries, who have found that by the continued use of arsenic as a drug, even in fractional parts of a grain, certain consequences arose directly contrary to those experienced by the partakers of it in Styria.

II. The want of proof by analysis that the substance said to be taken was really arsenic; the absence of any chemical examination of the excretions of an arsenic-eater, so as to prove that arsenic really had been swallowed; the want of any account of its effects when first begun to be used; or of any information as to the origin of the custom.

Most of these objections, however, have been removed by the investigations of Drs. Knappe and Heisch, to the former of whom I am indebted for much interesting information on the subject.

It is not at all surprising that in other countries there should be a prevalent impression of the non-existence of this practice in Styria, seeing that in Austria itself those who have not made special inquiries on the subject are generally sceptical as to it. Any one, therefore, passing through Austria and making casual inquiries, would most likely be told that the practice of arsenic-eating was not generally known or believed in. It is not difficult to account for this. The people who eat arsenic have the idea that it is regarded as a bad habit, and therefore one to be concealed as much as possible, just like opium-eating in this country; and they have the additional reason for concealing the practice, that from the strictness of the laws regarding the sale of poisons, they cannot get the arsenic by open purchase, as the opium-eater in this country can get his laudanum, and therefore they are generally obliged to purchase it from illicit dealers.

I now proceed to narrate what I have myself ascertained by personal observation. Though without an introduction to him, I called on the Medicinalrath, Dr. Von Vest, who, on learning the object of my visit, with great courtesy put at my command any papers that his office contained, and, in addition, supplied me with introductions to Drs. Knappe, Macher, and Tingler, the two former of whom I was fortunate enough to see, but I was unable to spare time to see Dr. Tingler.

Dr. Macher, now resident at Stainz, who is thoroughly acquainted with all the medical matters of Styria, and whose experience during a long period of active professional work there, makes his opinion of no small value, informed me, that, although cognizant of the existence of the practice, he had little personal experience in the matter. He related to me, however, one case, in which a woman, who had been tried for poisoning her husband with arsenic, had been acquitted, from "want of evidence," the plea for the defence being that the man had been an arsenic-eater. Though this defence was generally believed to be false, it shows, at all events, that the practice has in a court of justice been admitted to exist, and has served, in at least one instance, as a successful ground of defence.

Dr. Knappe, of Liegist, in Middle Styria, an hour's journey from Gratz, was my next informant; and when I first spoke with him of the case of J. W., already alluded to as the subject of experiment, and whose urine had been examined by Dr. Schäfer, he described him as a small, strongly-built man, with a great muscular development, a wood-cutter by trade, who had taken the drug for a period of twelve years. Dr. Knappe further stated to me that while personally ignorant of the actual existence of an arsenic-eater in the neighborhood, he could go with me to Upper Styria, and show me the above man, but he suggested that we should first make inquiry in the village, whether or not any of those persons described to him as indulging in the habit could not be got to take a portion of it before me. I accordingly slept in Liegist that night, and next morning I had the satisfaction, in presence of Dr. Knappe and my companion Dr. Rutter, of having my first interview with an arsenic-eater.

Case I.—Mathias Schober, a healthy-looking, fresh-complexioned, fairly muscular young man of the age of 26 years, and about 5 feet 9 inches in height, a native of Liegist, and employed as a house-servant there, said he had taken hüttereich for about a year and a half, not, however, white arsenic, but the yellow arsenic or orpiment, of which he took a specimen from his pocket and showed it me. Of this I retained a piece for chemical investigation. He informed me that he took the arsenic in order to keep strong, though he had never suffered from ill health. He said he had never experienced any bad effects, even when he first began using it, that he had at first taken rather less than a grain every fortnight, that he now took it twice a week, and that on omitting to take it for any longer period, he experienced a longing for it, which was relieved by a repetition of the usual dose. His reason for taking the orpiment instead of the white arsenic was, that it was more easily procured;

but having professed himself quite indifferent whether it were arsenious acid or the sulphuret, Dr. Knappe produced a paper containing the former (of which I also kept a sample), and having asked him to choose out a piece such as he was in the habit of taking, it was weighed and found to be nearly five grains; we had no finer weight than one grain, but the piece of arsenic was much over four, though less than five. Dr. Knappe, having carefully ground this to powder on a clean piece of paper, it was tranferred to a small piece of plain white bread, about as large as a man's thumbnail, and this the doctor put into his mouth; Schober chewed it and swallowed it, and then swallowed another portion of bread the same size immediately after. This was at 9.30, A.M. He stayed with us a few minutes, but he had to return to his work, promising, however, to come back in a short while. This he did at 11.30, two hours after, and made water in my presence to the amount of what I estimated at twenty-eight ounces, into a vessel previously carefully cleaned, and the urine was put into bottles thoroughly washed by myself. Unfortunately, in the hurry of my departure, in trying to pack these bottles into my hat-box, I broke one, and thus lost part of the urine. Since my arrival in this country, I subjected the contents of the two remaining bottles to chemical analysis, adopting the distillation process of Dr. Taylor as the most convenient way of separating arsenic from the organic matters of the urine. For this purpose the urine was carefully evaporated to dryness in a clean retort; the nearly dry residue was covered with strong hydrochloric acid, and distilled into a well-cooled receiver. The product, amounting to about half an ounce, was a clear, feebly pinkish fluid, thirty minims of which, when treated both by Reinsch's and Marsh's process, gave very characteristic arsenical deposits.

Schober also came the following day to see me, having taken no more arsenic since the dose which he had swallowed before me twenty-six hours previously. I again secured some urine which he passed in my presence, and this, when chemically examined as above, also yielded arsenic freely.

Case II.—Joseph Flecker, æt. 46, a muscular, healthy-looking, clear-complexioned man, a tailor by occupation, told us that he had taken hüttereich, generally the orpiment, for a period of fifteen years. He first began to do so on the occasion of the inhabitants of a house, in the neighborhood where he lived, being attacked with fever; and when fourteen people had died in it, and no one would enter the premises, he determined to do so, and took, as a prophylactic, about one grain of arsenic daily for three successive days, while going to the infected house, and though he said he had not felt quite well at the time, he was unable now to describe specially what had ailed him; but on being asked if he had ever suffered from vomiting or irritation in the stomach, he said he had not.

The day before my interview with him, he twice, viz., at 10.30

and 3 o'clock, had, in the presence of several of the villagers of Liegist, and on one of those occasions in presence of the burgermeister, who informed me that he had seen him do it, taken a piece of the sulphuret of arsenic from his pocket, and scraped off a certain quantity of it on a piece of bread and eaten it. He brought with him a small bottle of his urine, which he stated to have been passed eighteen hours after the last of the two doses, and in which I have since found a considerable quantity of arsenic. The reason which he assigned for this public exhibition of his arsenic-eating capacities was, that it had become the subject of conversation in the village that two strangers had come a very considerable distance to witness an example of arsenic-eating, and inquire into the practice, and that he wished to make open demonstration of his assertion that he was capable of tolerating a considerable dose of arsenic. When he first came to me he seemed somewhat unwilling to take a dose that day, owing to his previous performance, and seemed to fancy it possible that he might have some slight irritation of the stomach, such as a feeling of warmth accompanied by thirst. He did not appear to be able to give any reason for anticipating this result; perhaps he intended it as a gentle hint that the thirst might require assuaging; at all events, having been informed that he should not want the wherewithal to quench it—(he confessed to being by no means abstemious in the matter of alcoholic potations), he, to satisfy our curiosity, picked out a piece of arsenious acid, from the same parcel that had been shown to Schober, and which, on being weighed, was found to be as nearly as possible six grains. This he placed entire on a small piece of bread, and taking it into his mouth, crunched it up audibly, and in about two minutes after swallowed six or seven ounces of cold water, stating that he liked to drink immediately after swallowing a dose, and on such occasions preferred water. I then made him open his mouth and inspected it narrowly, but found it quite clear of bread crumbs or anything else, thus assuring myself that no jugglery could have been practised. After having swallowed the arsenic four minutes, he eructated slightly, but till he left us, a quarter of an hour after, he had no symptoms of any bad effect. The six grains were taken at 11.30, and at 12.15 he returned, and passed a small quantity of light-colored urine. Nearly the whole of this was bottled for exportation, and the twelve ounces thus secured were treated by the process of distillation above described, and also yielded a characteristic deposit of arsenic.

Flecker gave me the following account of his use of arsenic. He stated that he generally takes about the quantity we saw him swallow once a week, but with variations in the intervals, there being sometimes four days only, sometimes eight days between the doses. That when he has a distance to walk to his work, he takes a larger dose, and is then in good spirits for about eight days. That if he, however, intermits it for fourteen days, he feels stiff in the feet, with general lassitude and a craving for another dose. If his victuals are hard of digestion, he takes a dose to assist the stomach, and if he takes a rather full dose, he brings a good deal of wind off his stomach, but never vomits. He stated that his father had taken arsenic before him, and in considerable quantity, and that in the immediate neighborhood of Liegist numbers use it, several taking it daily, and many in larger doses than he. He said that all who take it are healthy—that he never knew of any one vomiting from its use, and he believed that, like the use of tobacco, if the dose is very gradually diminished, an arsenic-eater can break himself of the habit.

One of the objections which has been made to the acknowledgment of the reality of arsenic-eating is, that the substance swallowed has not been ascertained by chemical examination really to be arsenic. This link in the chain of evidence I am able to supply. The white substance which I saw Schober and Flecker swallow, part of which I have now in my possession, is pure arsenious acid. It sublimes into octohedral crystals, and leaves no appreciable residue. The yellow substance which Schober used is a fair sample of the orpiment of commerce, and contains, as that substance usually does, a considerable portion of free arsenious acid.

I am, of course, not in a position to give any opinion as to the extent to which arsenic-eating prevails in Styria—my time would not have permitted me to enter upon such an inquiry, nor would it be easy to get satisfactory information as to a practice which is generally kept secret; confirmation of the fact of its existence is more interesting to us scientifically than its extent; and that it is a fact, my personal observation enables me confidently to affirm. That arsenic-eating in Styria is a universal habit, or one indulged in by even a majority of the male peasantry, I do not for a moment suppose; but the averment "that the story of the Styrian arsenic-eaters is not only unsupported by adequate testimony, but is inconsistent, improbable, and utterly incredible"—(Kesteven, *Asn. Med. Journal*, 1856, p. 811); or that these are "absurd and exaggerated statements, utterly inconsistent with all that is known concerning the action of arsenic in this or other countries, and but for the fact that they for a time received the literary support of Professor Johnston, and were diffused by him in an amusing book, they would not have required any serious refutation"—(Taylor, *On Poisons*, 2d Ed., p. 92); or that it is a "mess of absurdity," "a pure fable"—(Christison, *Edin. Med. Jour.*, 1855–56, pp. 709, 710), are, although justified by the state of knowledge at the time they were made, no longer tenable; but, on the contrary, we can no longer doubt, to use nearly the words of Roscoe, "that decisive evidence has been brought forward not only to prove that arsenic is well known and widely distributed in Styria, but that it is likewise regularly eaten in quantities usually considered sufficient to cause immediate death."

It is probable that many of the physiological actions attributed to it are fanciful, and that its use is mixed up with a good deal of superstition, as, for example, in the case of the poacher who takes it to give him courage to pursue his depredations on ground that is new to him, or that of the ostler who, in giving it to his horses to improve their coats, thinks that it will have no beneficial effect unless he partakes of it at the same time.

It is evident that the confirmation of the existence of the practice of arsenic-eating must lead us to modify some of the opinions that are entertained with regard to the influence of habit on the action of poisons. It has long been notorious, that by habit the human body may be brought to bear with impunity doses of organic poisons, such as opium, which, to those unaccustomed to them, would certainly prove fatal; but "it has hitherto been considered by toxicologists that, except within very narrow limits, habit appears to exercise no influence on the action of mineral poisons"—(Taylor, *On Poisons*, p. 89). Though the experiments of M. Flandin, by which he proved that he could bring dogs to bear fifteen grains of arsenious acid in powder in twenty-four hours without injury to their appetite or health, and the practice of administering arsenic to horses, have long been known as pointing rather in the contrary direction, this has been supposed to be due to some peculiarity in the constitution of the lower animals. The facts which have been ascertained with regard to the Styrian arsenic-eaters, and which the above observations confirm, entitle us to maintain that the modifying effect of habit is not confined to organic poisons, but extends to those of mineral nature, at all events to arsenic.—*Edinburgh Medical Journal.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 6, 1864.

The United States Sanitary Commission in England.—We have read with much satisfaction a little pamphlet recently published in England, and which has reached its second edition, under the title, A Woman's Example: and a Nation's Work. A Tribute to Florence Nightingale. The object of the anonymous author is to enlighten the English people with regard to the nature and operation of our great National Commission, with the hope of enlisting the sympathies and obtaining the substantial aid of his countrymen in forwarding its gigantic and beneficent task. Our nation has received, during the last four years, so little sympathy from the mother country, at least as expressed by the public press—such pains have been taken by our enemies to blacken our national character in the eyes of the English people, that during this time an American could hardly find a less congenial spot on earth than that island, which has heretofore boasted itself as the foremost friend of the cause of freedom and justice the world over. There has been such a spirit of unfairness in this from the first, that the natural wish to set ourselves right in the eyes of that nation has been almost displaced by the universal feeling of indignation to which it has given rise ; and we have felt little disposition to say more than "let the unjust be unjust still." Of course we would not overlook the shining exceptions to the common feeling, of the few men who have so earnestly striven to uphold our cause in a hostile community, and have so bravely made good, in their own persons, the traditional ideas of British honor and British justice. As one of the valuable fruits of this friendly spirit, one which is calculated to convey to its readers on the other side of the water not only a just impression of some of the humane and Christian aspects of our war, but information of much practical value, we hail with great pleasure the publication of this little pamphlet.

The author very naturally begins with a graceful dedication to Florence Nightingale as the founder of organized movements by civilians to soften the horrors of war by bringing the sympathies and many of the comforts of home to the battle-field and the military hospital. A slight sketch of Henri Dunant's scheme for a general European Sanitary Commission follows, and then in the second chapter he takes up that of our own country. Adverting to the belief in Europe that our great struggle was but a dreary chronicle of bloodshed, ruin and despair, he says :—"Strange that the evil should all be known, and only the good remain concealed ! Yet amid all this wide-spread desolation, true hearts have beaten responsively to the cries of woe ; and loving women and noble men have achieved a work which Europe never has attempted on such a wondrous scale. As Englishmen, we must take pride in their success, for are not these Americans our own flesh and blood? and have they not profited in their labors by the example set before them in the Crimean and Indian wars?"

The pamphlet then goes on, through ninety pages, to give a succinct and methodical account of the organization and practical working of our Sanitary Commission in all its details, so that no one can rise from its perusal without a very favorable impression of the wisdom and humanity which founded it, and the liberality which has heretofore never failed to answer its calls for aid. Strained to the utmost, however, as our national energies have been, and drawn upon to an unprecedented extent as all our resources have been, the author makes an appeal to the British people to help us at the present time. And although we do not ask such assistance, and have not the shadow of a doubt that the American people will sustain our National Commission to the last man and the last dollar, yet as an expression of sympathy from a source from which we had almost come to look for little else but injustice and revilings, such a contribution would do something towards effacing the impression which we fear long years alone can obliterate. The author concludes as follows :—

"Such are, curtly and most poorly told, the results of the labors of the Sanitary Commission of the United States. That Commission has really been throughout this war the agent of the American people, who, to enable it to carry on its wonderful labor of love, have imposed upon themselves an enormous voluntary tax, ever increasing yet ever gladly given. Unfortunately, benevolence in this world is ofttimes limited in its action by incapacity of means, and the Committee is now making urgent appeals for additional support.

"Shall such a noble undertaking fail, after having achieved so much? No appeal has ever yet been made by its managers to European nations, nor is any likely to come from them; but is it right for us as *men*, children of a common family; is it right for us as Englishmen, brothers of the same race, to allow this noble work to fail for want of aid which we can offer? Thousands of the subjects of our beloved Queen are in the ranks of those contending armies, and every nation in Europe has suffering and wounded men there, who, like our own, are receiving the ever present ministrations of this untiring Commission. Can we—after America's beneficence to Ireland and Lancashire—can we refuse to lend a helping hand to a work so nobly instituted and so ably carried on?"

FEES FOR MAKING AUTOPSIES IN CASES OF LEGAL INVESTIGATION.—We are authorized to state, as the result of a decision of the Court of Suffolk County on the fees for autopsies when ordered by a coroner, that for an ordinary autopsy $30 will be allowed instead of $20—the old fee. But whenever there are circumstances of unusual responsibility, or involving much loss of time in testifying, &c., that a proportionate compensation shall be paid, up to the fee of the new fee table, viz., $50. This action has just been taken on the claim of a member of the Boston Medical Association for making an autopsy, wherein the new charge of $50 was handed in to the District Attorney.

EXPULSION OF TAPE-WORM.—Dr. S. A. Skinner, of Hoosik Falls, N. Y., furnishes us with the following case of expulsion of tape-worm by the use of pumpkin seeds, which occurred in his practice a short time since:—

Mrs. D , aged 23, a native of Ireland, has been in this country six months; has been out of health the last two years. About the first of August last she passed three yards of tape-worm without any previous medication. She then applied to a physician, who treated her three weeks without success. On the morning of Sept. 1st she called at my office. I requested her to omit her dinner, supper and breakfast, and to take the following prescription. Three ounces of pumpkin seeds, previously peeled and pulverized and mixed with one pint of milk; one half to be taken at bedtime, or at 10 o'clock, P.M., the remainder early in the morning. In two hours after taking the last half, to take one ounce and a half of castor oil. I made her a visit in the morning, previous to her taking the oil; the pumpkin seeds had operated as a brisk cathartic, but none of the worm passed. She then took the oil, which operated in less than one hour and brought away a part of the worm; in a short time the remainder came away. My patient is now convalescent, with a good appetite. The worm, which I have in my possession, measures 66 feet.

TREATMENT OF NÆVI MATERNI BY THE SUBCUTANEOUS INJECTION OF SOLUTION OF PERCHLORIDE OF IRON.—Mr. Robert B. Carter reports, in the *Medical Times and Gazette*, a second case of death following this operation, which has been communicated to him by Mr. Nathaniel Crisp, of Swallowfield. A *post-mortem* examination showed that the point of the syringe (the nævus being on the cheek) had penetrated the transverse facial vein, and that the blood in the right cavities of the heart had been immediately coagulated. Mr. Carter concludes with the remark, that he feels justified in saying that the subcutaneous injection of perchloride of iron should not be practised, unless it is possible, by pressure with fingers or forceps, by acupressure or even the temporary application of ligatures, to close for a time the channels of the efferent veins ; where this can be done, the remedy is free from danger, and will usually be effectual ; but without such a precaution it entails so much risk to the patient that only the most exceptional circumstances would permit him to advise or employ it.

DR. V. J. FOURGEAUD, Editor of the *Pacific Medical and Surgical Journal* for the last two years, resigned his position on the issue of the August number. He complains of not having had the " harmonious support and co-operation of the profession generally."

Dr. Robert Bartholow, late Assist. Surg. U. S. A., having resigned his position in the army after a service of seven years, has entered into private practice in Cincinnati, Ohio.

Messrs. Lippincott & Co., of Philadelphia, have in press a new edition of Wood & Bache's United States Dispensatory.

B. Frank Palmer, Esq., so well known as the inventor of the Palmer Leg and Palmer Arm, has recently had conferred upon him the degree of Doctor of Laws by the Western University of Pennsylvania.

As a product of the secretion of the kidney, a new acid of a colloid character has been described by Dr. Marcet. It consists only of carbon, oxygen and hydrogen, being poor in the last element and rich in the first. Its quantitative analysis has not yet been made ; but it is thought that it originates in the transformation of one of the non-nitrogenous constituents of the liver known as glycogenic substances.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, OCTOBER 1st, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	60	47	107
Ave. mortality of corresponding weeks for ten years, 1853—1863,	50.7	41.0	91.7
Average corrected to increased population - - - -	00	00	100.81
Death of persons above 90 - - - - - - - -	0	0	0

DEATHS IN BOSTON for the week ending Saturday noon, Oct. 1st, 107. Males, 60—Females, 47.—Accident, 7—apoplexy, 2—disease of the bowels, 1—inflammation of the bowels, 3—congestion of the brain, 1—disease of the brain, 4—bronchitis, 1—cholera infantum, 5—consumption, 12—croup, 4—diarrhœa, 4—diphtheria, 1—dropsy, 1—dropsy of the brain, 2—dysentery, 9—entero-colitis, 1—exhaustion, 1—bilious fever, 1—scarlet fever, 1—typhoid fever, 5—typhus fever, 1—gangrene, 1—gastritis, 1—disease of the heart, 4—disease of the hip, 1—infantile disease, 2—disease of the kidneys, 1—congestion of the lungs, 1—disease of the lungs, 1—inflammation of the lungs, 5—marasmus, 2—measles, 1—old age, 1—paralysis, 2—smallpox, 2—teething, 1—convulsions, 5—syphilis, 1—unknown, 8.

Under 5 years of age, 38—between 5 and 20 years, 11—between 20 and 40 years, 26—between 40 and 60 years, 20—above 60 years, 12. Born in the United States, 64—Ireland, 33—other places, 10.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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THE MEDICAL MANAGEMENT OF INSANE WOMEN.

BY HORATIO ROBINSON STORER, M.D., OF BOSTON, SURGEON TO THE NEW ENGLAND HOSPITAL FOR WOMEN.

[Read before the Suffolk District Medical Society Oct. 1, 1864, and communicated for the Boston Medical and Surgical Journal.]

II. ADVISORY MEDICAL BOARDS REQUISITE AT ASYLUMS.

IN one of the April numbers of this JOURNAL for the present year,* a series of papers was initiated upon the causation, nature and more rational treatment of insanity in women. My remarks were based, it was stated, upon extended observation, patient reflection, and a firm belief that the subject, though hitherto neglected, might be made to afford in practice important results. The few months that have since elapsed have been strongly confirmatory of every assumption then made; additional cases of the kind alluded to have been sent to me for examination and for treatment, and my views have been endorsed by gentlemen much older in the profession as in accordance with their own experience; and I acknowledge with pleasure the cordiality with which my attempt to elucidate a question among the most delicate and withal among the most important of those pertaining to obstetrics, has been so generally received.

The ground I have taken regarding this subject, is briefly the following:

1. That the insanity of women is, in a large proportion of cases, of reflex character and origin.

2. That in by far the majority of these, it is unattended by organic cerebral change; and therefore,

3. That like all other of the manifold reflex disturbances of women, it may be prevented, treated, cured by medical and surgical means.

Upon the above as a basis, I have now to offer certain practical suggestions concerning both the public and the private management of insane women. Of these, but a single one will be considered in the present communication.

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* April 7, 1864, p. 189.

To the point alluded to I have already called the attention of the profession at the late meeting of the American Medical Association at New York; my remarks being embodied in a paper upon "The Relations of Female Patients to Hospitals for the Insane." This communication, having received the commendation of the Section of Practical Medicine and Obstetrics, was by it presented to the Association in Committee of the Whole, with the result of unanimous approval, the resolutions passed by the Association being as follows:—

"*Resolved,* That in the opinion of the American Medical Association, it is expedient that there should be attached to every public hospital for the Insane, one or more consulting physicians, who may be consulted at the discretion of the Superintendent; such measure being for the interest of the hospital, its medical officers, and its patients.

"*Resolved,* That a copy of the above resolution be transmitted to the Board of Trustees of each of our public hospitals for the Insane, and also to the Secretary of the Association of American Superintendents, with the request that it may be endorsed by that body, and the act proposed be urged upon the respective boards with which its members are officially connected."

It is the object of the present paper summarily to explain the advantages and necessity of the proposed measure, as comprising part of a systematic and more rational treatment of insane women; premising that with the single exception of Dr. Ray's most excellent institution at Providence, there is no asylum in this country provided with an advisory board. The so-called medical visitors attached to the Hartford Retreat are not appointed with reference to special professional consultation, while at the McLean Asylum, as is also the case at Bloomingdale, the consulting physicians and surgeons attached to the general hospital, have nothing whatever to do, officially, with the insane department. If any of these gentlemen have ever been called upon for advice, it has merely been as an act of courtesy and not as a right. They have not been selected with reference to any pre-eminence in this specialty, and they would probably none of them lay the slightest claim to be considered "expert" regarding insanity.

The advantages, as regards female patients, of an Advisory Board of Consulting Physicians at Insane Asylums would, I conceive, be several; applying—

I. To the patient,
II. To the Hospital,
III. To the Superintendent,
IV. To the Profession, and
V. To the Community.

I.—The benefit of an advisory board to patients will, in the case of females, be found to be extreme. My assumptions as to the nature and truly reflex character of the larger proportion of their psycho-pathological manifestations being granted, as must be done by every observer who has carefully studied these cases obstetrically (and this is the touchstone to which all the diseases of women must be subjected), it follows that, for the purposes of proper diagnosis and of successful treatment, the usual measures resorted to at asylums in the case of insane women are wholly inefficient. To efface the effect in these cases present, we must reach its cause—persistent and active, in some instances even more active, after the world with its cares and its turmoil has been shut out. Seclusion does not restore a displaced womb; absence from friends, except in some cases from a husband, does not cure an inflamed or ulcerated cervix; the prohibition of letter-writing will not control suppression or redundance of the catamenia, nor a rigid diet the vagaries of an irritable ovary. What is required is that the case, whenever doubtful, should be carefully examined and thoroughly understood. This, as our asylums are at present conducted, and speaking in more than general terms, is never done with the female patients; it is not even attempted. The reasons of such seeming negligence I proceed to explain, and to suggest its cure.

The medical examination of an insane woman is not always easily made; and at an asylum is attended with certain risks to the medical attendant, existing in private practice with insane patients, unless due precautions are taken, but enhanced at asylums. I refer to the chance that the examination may appear to the patient's disordered mind a very different piece of business from what it is; and that it may be so reported to other patients and to her friends. Perhaps, indeed, the misconception may remain a sincere and persistent belief, even in case of eventual cure. These risks are in reality, as things now exist, far more tremendous than might be imagined; but when the charges are recollected that time and again have been made and pressed to trial in the courts by females whose delusions have been merely the effect of the transient administration of an anæsthetic,* it will be seen that with women who are really and permanently insane the danger is increased.

How can these difficulties, these risks, be avoided and overcome? So far as mere objections of the patient are concerned, or her forcible resistance even, etherization is sufficient, or merely the narcotization still so common for purely therapeutical ends in our asylums; but for protecting the medical officer's reputation and that of his hospital, no measure that has been or can be proposed will suffice, save an advisory board for medical consultation. I know that examinations may be attempted in the presence of junior medical officers or of a matron, but these are all parties of identical interest with the Superintendent; they are his subordinates, usually dependent for their places upon his good will, and therefore their presence and their evidence are without that moral weight which can alone be protective to such an examination as is required.

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* For cases in point, that of Dr. Beale, of Philadelphia, and others, I refer to this Journal, Nov. 1858, p. 287; Philadelphia Medical Examiner, December, 1854; Western Law Monthly, April, 1860, p. 183; Wharton & Stilles's Medical Jurisprudence, 418, § 443.

There has widely obtained an opinion, still existing to a certain extent as must be allowed by every candid observer, that asylums for the insane are rather houses of detention than hospitals for cure; an idea based upon the prison treatment and discipline of these institutions in former days. Everything that can be done to disabuse the public of so great an error, or to prevent its having the slightest foundation in fact, is in every respect work well worthy our attention. For a large class of their patients, probably on the average fully one half, how can asylums be hospitals for cure, if the first step towards ascertaining the predisposing and exciting cause and true character of the mental disease is never taken? The apprehensions concerning the unnecessary or wrongful detention of female patients that have so often found vent in our journals and in the public courts, have generally been without reason or even show of reason as regards intentional wrong. Superintendents, there is every ground for believing, are men of honor, anxious to do their whole duty, and above fear or favor. But are there no reasons for fearing that in many, perhaps in all our asylums, female patients may occasionally be unintentionally detained, whose cases admit of relief or cure? The answer is evident enough from the statements already made, from the admissions of Superintendents themselves, from the results of similar cases in private practice to whom, unlike those in asylums, appropriate treatment has been applied, and from those instances of cure, however rare, that from time to time have spontaneously and accidentally occurred at asylums, where after many years, perhaps of no improvement at all, the grand climacteric has been passed, or a tumor become checked in its growth, or an old and indolent pelvic abscess found vent, or the long-checked catamenial fountains again obtained for themselves effective discharge, and the mental disturbance that had been dependent upon the central lesion has disappeared. Such cases have been put upon record, but their true value and importance have not been recognized.

The public apprehensions to which I have alluded have some influence, how much or how little none of us can well appreciate, in preventing the sending of patients to insane asylums. Now it is conceded by all familiar with the subject, that the cure of every form of insanity, secondary and reflex, as well as primary and organic, depends in a great measure upon the earliness of the period at which proper treatment is commenced. Asylums are, or certainly should be, essentially hospitals for cure. Everything that we can do to make them so is a threefold advantage to the patient; it increases her chance of being sent at all to the institution by her friends, of being sent sufficiently early, and last, but not least important, of her being treated *secundum peritissimam artem.*

II.—I have said that by a consulting board taken from gentlemen in private practice, and therefore familiar with the details of obstetric or gynæcal management, these various difficulties as regards doing the best for the welfare of female patients would be likely to be overcome. Would it not also be of decided advantage and aid to the superintendent, looking at the question as it involves his best interests alone, and putting aside the satisfaction that would naturally accrue from the feeling that everything was being done for his patient that could be suggested by science or art? We are all of us familiar with the vexations to which of late years our own superintendents have been constantly subjected in courts of law. In the cases to which I refer, many gentlemen have been summoned from civil practice to give testimony for or against the managers of asylums. In a portion at least of these instances, there is reason to believe that there has existed one or another form of functional uterine or ovarian derangement which, had its existence and character been accurately determined, might of itself have thrown such light as satisfactorily to settle the question of sanity or insanity, of detention or non-detention, of permanent disability or of cure. In such a case were the disease to have been detected and properly treated, it is probable that the delusions involved might have been made to permanently disappear, and an immense amount of scandal and professional disparagement avoided.

These are questions of direct interest to the profession as well as to any individual superintendent. Gentlemen have more than once acknowledged to me that they felt strongly tempted to retire from a position they had filled with usefulness and honor, merely because of the annoyance to which they were thus periodically subjected; and in case of a vacancy arising at any hospital, as has lately been the case at Northampton, it becomes a matter of vital importance to a candidate for him to decide whether he will voluntarily encounter the almost certain ordeal at law, to which he may be subjected by any one of the richer class of his female patients.

To superintendents the appointment of an advisory board would prove at once comfort, assistance and safeguard. The probability of this was most courteously allowed by Drs. Tyler of the McLean Asylum, Walker of South Boston, Jarvis of Dorchester, and Choate of Taunton, at the hearing granted the Commission in Insanity during the session of the Legislature of Massachusetts just ended; and its realization in practice was affirmed on the same occasion by Dr. Ray, of Rhode Island—the only superintendent in this country, from having an advisory board, placed in a position to express a competent opinion concerning his female patients. One of the members, indeed, of that very board, Dr. Mauran, of Providence, took occasion at a subsequent period, during the late session of the American Medical Association at New York, to express in the most unqualified manner, from actual and extended experience, his approbation of the measure now proposed. Its necessity is indeed so palpable that we may well wonder that the change has not long since been effected. That it is still to be accomplished alone necessitates any extended argument.

I might easily adduce still further evidence of the character of that now given, but will content myself with a single line. In a letter dated August 3d ult., Dr. John S. Butler, the accomplished Superintendent of the Retreat at Hartford, writes me as follows, concerning a patient now under my charge:—"I always suspected that there might have been some uterine irritation or disorder acting perhaps as the exciting cause, but under all the embarrassing circumstances of our relative positions, I could not satisfy myself. Situated as I am here, I could not make such an examination as was necessary for a full understanding of her case; you can much better insist upon one than I could."

Could any testimony be more conclusive than this?

III.—Are there advantages to the profession from an advisory board, over and beyond those that I have spoken of as accruing to the superintendents themselves? Even here it must be allowed that there is an affirmative answer.

At the present time there are outside the asylums very few gentlemen skilled in psychiatry, very few even who lay claim to being psychical experts. The truth of both of these statements is evidenced at every important trial that involves questions of mental unsoundness. Few in private practice have opportunity of directly comparing, upon any large scale, the various phases of insanity; few, therefore, become directly and specially interested in their study. At the present time, so great is the scarcity of experts, that the resignation or death of the superintendent of any large asylum strikes with dismay the board of trustees of nearly every other similar institution in the country, lest the new incumbent to be chosen should be stolen from themselves. This is no exaggeration; the writer happens within the present season to have been semi-officially consulted concerning a vacancy in one of our asylums, and he knows very well what names were sent to him for the expression of his opinion, and the remarks concerning them that were made to him by trustees who possessed for the time being the services of the gentlemen referred to.

Now I contend that the establishment of advisory boards would not only tend to stimulate physicians to more frequent study of mental disease; it would afford a larger field from which to select gentlemen to fill the responsible positions of superintendents and trustees. It is very evident that such would necessarily be the case. No physician would be likely to be appointed to the advisory board who, with fair reputation in general practice, had not shown some interest, be it more or less, in the special department now under consideration, and had not a certain amount of familiarity with the innumerable mental vagaries of nervous women. Opportunities would of course, from his position, be likely to become frequent for further research, and the fascinations ever acknowledged to attend the study of mind diseased would tend to perfect him therein. As a single instance of what would naturally and generally be the result, it may be mentioned that shortly after the report of the late Massachusetts Commission in Insanity had been rendered, it was urged upon two of the three gentlemen constituting that board, that they should allow their own names to be used as eligible to the vacant superintendency of the Northampton Asylum; upon the third of their number similar arguments would have been used had he been a physician. It is unnecessary to add that in one at least of these instances, such position would have been incompatible with other though perhaps not higher aims; for I can conceive of no professional office with greater responsibilities, more constant call for all the elements of one's better nature, more opportunity for making a deep and grand mark upon the tablet of the time, than the superintendency of one of our New England Hospitals for the Insane.

It may be alleged that there are few men fitted to be chosen as medical advisers to an asylum. This remark is undoubtedly true, but it depends entirely upon the profession how long such general incompetence shall exist. Already a door has been opened to the needed reform by the establishment of Dr. Tyler's class at the Harvard Medical School, an example soon to be followed, we trust, at all the colleges in the country. Towards such recognition of the claims of mental disease upon the profession at large, the measure I now propose would greatly tend, and on the other hand the more thoroughly mental disease becomes understood, the more incomprehensible it will appear that this greatest of elements towards the understanding and efficient treatment of female insanity should have been so utterly and persistently lost sight of.

V.—To the community at large, need I say, the reform proposed is of incalculable importance. As a mere matter of political economy, and to prove the worth in dollars and cents of every productive worker restored to reason, there were presented by the late Massachusetts Commission in its report to the Legislature some startling calculations and conclusions respecting the results attainable and already attained.* The statements to which I have referred, prepared with the minuteness and accuracy for which he is so celebrated, by Dr. Jarvis, of Dorchester, were presented more especially with reference to the male sex; but as regards the cost of support, and the pecuniary gain to friends and the State effected by cure, they equally apply to the case of women; while the chance of cure in women, provided only the proper treatment be afforded, is probably much greater than in men.

I have spoken of doubtful cases of insanity in women, which of late years have largely occupied the time of our courts and have kept the public mind excited and troubled. The community would be benefited by the prevention of such trials or their more summary settlement, which can only be done by the advisory board now proposed.

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* Mass. Senate Doc., 1864. No. 72, p. 5 et seq.

I have referred to the danger of libellous charges against superintendents, in case they do their whole duty by the female patients entrusted to their charge. In the advisory board we have an efficient safeguard.

I have mentioned the increased confidence that would be felt in asylums should they be provided with such a board, and the larger proportion of female patients that would probably be sent for treatment at an earlier and more curable stage of the malady—in both respects a benefit being conferred upon the community—and the advantage that would accrue to it from a more general interest being taken in these diseases and greater proficiency in their treatment attained by medical men. Can we doubt that the board will soon be added to the management of every hospital?

In my communication upon this subject to the American Medical Association, I urged that the appointment should in every instance be an honorary one; as thereby tending to elevate the profession and the character of the services rendered. To my positions on this point, exceptions were taken by Dr. Griscom, of New York, upon the ground that physicians in private practice are at the best ill paid, and that by no one, more especially by the Association representing the profession at large, should action be taken tending to the establishment of further gratuitous labor.

While I strongly differed from the conclusions to which Dr. Griscom would press his argument, the resolutions originally offered to the Association were so far modified by passing this point in silence, as to leave it discretionary with trustees in each instance to pay or not to pay a salary to members of the advisory board; it will have been noticed that in this form the resolutions were unanimously passed.

In my own opinion, premising that the amendment of Dr. Griscom had been fully urged by him at the preliminary discussion before the Section of Practical Medicine and Obstetrics, and had been there rejected by a very large vote, the Section adopting and presenting the resolutions in the form first offered, as their own—in my opinion, I would still contend that these appointments should in every instance be strictly and purely honorary. I am led to this opinion by the following reasons:—

1st. Such appointments at ordinary general hospitals are always of this character; the only instance within my own personal knowledge in this country where consulting physicians or surgeons receive any emolument being at the General Hospital at Quebec—an example of short-sightedness on the part of its managers, or of parsimony on the part of its attendants only equalled by the whole detail of management of the Provincial Lunatic Hospital at Beauport, near that city. To the utter failure of this last-mentioned institution, the only one in the Lower Province, to accomplish its end, I referred in my remarks before the Association. It is a subject to which I may allude in another communication, so necessary is it that the evil there existing should be exposed and abated.

If it is contrary to the ethics of the American Medical Association for physicians ever to give gratuitous advice in cases where a trifle could possibly be paid, then do we all of us who hold any honorary appointment at an hospital, daily and wittingly infringe the laws of that code; and we should all—among the number Dr. Griscom himself, one of the Physicians to the New York Hospital—be ignominiously expelled from the Association. That the gentleman referred to still holds his official position, and has not offered to resign it, is sufficient proof that his argument before the Association was so far fallacious as it was insufficient to control his own action in a matter similar to the case in hand.

2d. An honorary appointment is better for the interests of the hospital. Putting aside the fact that our public hospitals for the insane are in greater measure of a charitable character than remunerative, a large proportion of their patients being paupers, it is evident that the community, so sensitive upon the point of possibly unnecessary detentions, would be more at ease with an unpaid than a paid advisory board; there would seem less likelihood of collusion, more probability that its action would be fair and unbiassed.

3d. It is also better for the interests of the gentlemen composing the board. I acknowledge (as who does not?) the indirect advantages pertaining to an hospital appointment; that it is generally supposed to be conferred upon those by taste or previous education best fitted to fulfil its duties. But beyond these considerations, it is certain that the adviser who is unpaid at once holds a much more independent position, and that for this reason his dictum has much greater weight. Unpaid the position is much more likely to be unsought; and therefore, conferred, it gives the greater honor.

4th. And finally, an honorary appointment is also a better one for the community. Every salaried medical office is likely to become the object of contention and political intrigue, and therefore to be filled by incompetent persons. That such offices do from time to time happen to be occupied by the right men seems rather a matter of accident than of necessity, and in the nature of things it is hardly to be expected.

It should, of course, as I have intimated, be left entirely to the discretion of the superintendent in all cases as to when and to what extent such a board as I have suggested should be consulted by him; the object being to offer him every opportunity of curing his patients, without in any way shackling his judgment, and above all to put it into his power to treat his female patients within the hospital as understandingly, as judiciously and as thoroughly as the same women would be treated were they sane and at their homes.

The above remarks are commended alike to the attention of superintendents, of trustees and of the profession at large. In my next communication upon the subject I shall enter into matters of stricter medical and surgical detail.

DR. GAILLARD'S PRIZE ESSAY ON OZONE; ITS RELATIONS TO HEALTH AND DISEASE.

[Continued from page 198.]

When considering the sources of ozone, it would seem reasonable to suppose that there should be but little of this agent manifested in city atmospheres, repeated experiments have proved that such is always the case. Here there is scarcely anything to generate ozone, and everything to consume it. In the country, or at sea, on the contrary, ozone is always relatively abundant. Ozonoscopes placed near a large sewer, in the city of Metz, were discolored (and then slightly) but four times in six months. A series of experiments at Koenigsburgh indicated similar results. Very interesting and important investigations have been instituted at Metz, Versailles, and Paris, for the purpose of determining the chief peculiarities of atmospheric air in inhabited places. The results are valuable and suggestive. Ozonoscopes placed in the halls and wards of hospitals gave no traces of ozone, whilst, placed on the exterior of the buildings, they manifested hues corresponding to degrees 7, 8, and even 10 of the ozonometric scale. These hospitals were in the most cleanly and perfect condition; well ventilated, and manifesting no perceptible odor on entering them. Ozonoscopes were placed in the halls for the wounded, on the ground floor and in the rooms, where the windows were opened twice a day, and in which were placed not more than eighteen or twenty patients. In the wards for venereal and fever patients, where the same influences existed, ozonoscopes were also placed, the hygienic relations being equally good, and the thermometer in all instances not exceeding 60 F. Rooms were also selected, for these experiments, where the windows were kept always (by day) open. The ozonoscopes, judiciously arranged in all of these places, remained *in situ* for fifteen days, and exhibited no change whatever; there being not even a trace of ozone present. In a large and well-ventilated ward, once occupied by scorbutics, but which had been vacated for a month, the ozonoscopes manifested hues similar to those given on the exterior of the building; 7, 8, and 10 of the ozonometer.

These experiments were conducted with ozonoscopes furnished by M. Schönbein, and of course were perfectly reliable. The experiments at Metz were conducted by M. Scoutetten; those at Versailles, by Bérigny; and those at Paris, by Silbermann. At the Conservatory of Arts and Sciences, at Paris, Silbermann obtained no traces of ozone; whilst Bérigny, at Versailles, with the same ozonoscopes and at the same time, obtained hues corresponding to the highest degrees of the ozonometric scale.

These very interesting facts prove the effect of city atmospheres and the dwelling together of human beings, upon the formation and destruction of this vital and important hygienic agent. They suggest the imperative necessity of out-door existence; the danger of neglecting this; the unhealthiness of city atmospheres, and the true reason for the recuperative effect of country air. When physicians have been asked the true cause of this invariable benefit from country air, the reply has usually been in praise of its purity, with a traditional allusion, perhaps, to the increased exhalation of oxygen there, from the growing surfaces of vegetation. The hitherto vague and unsatisfactory teachings of chemistry, in this connection, have been their only guides, and it is not surprising that the effect of all has been to make the subject as obscure and ill-defined to those asking the questions, as it has always really appeared to those undertaking to give the proper replies. Oxygen is really no purifier of the air, as decomposition is increased under its influences. We are now taught, that the chief reason for the value of country air is to be found in the constant existence there of this vital and indispensable agent; the very life and strength of the atmosphere to the invalid; the great purifier of nature.

The purifying properties of ozone are indeed marvellous. Scoutetten placed meat, already undergoing putrefaction, in ozonized air; "in five minutes it was completely disinfected." Being removed for a time, it again emitted an insufferable odor; reimmersed in the ozonized air, it again became pure. Manure and the drainage from the amphitheatre of the Metz Hospital, the whole in a state of decomposition, were subjected to the influences of ozonized air, and in a few minutes entirely disinfected. Ozone was diffused through a large room, containing heaps of manure, in a disgustingly offensive condition; the odor was so immediately destroyed, as to surprise all who were present. Dr. Andrews, of Belfast, has recently presented to the British Association for the Advancement of Science, a compound of chlorine and ozone, which proves to be a rapid disinfectant and deodorizer. Ozonized chlorine has been prepared, in the United States, by Dr. Darby, and perhaps others; it is, undoubtedly, very similar to the preparation presented by Dr. Andrews. M. Schönbein has demonstrated, that when putrefied organic matters are subjected to the actions of ozone, the odor is destroyed as long as the ozonoscope gives evidence of the presence of ozone; but as soon as the ozonoscope remains unaltered, the odor immediately returns. Nothing more conclusively than these experiments can demonstrate the highly disinfectant and deodorizing properties of ozone.

Before dismissing this part of the subject, it should be stated that there is a probability of error or inaccuracy in the experiments, tending to show that whilst ozone, in the atmosphere surrounding the hospital at Metz, gave abundant evidence of its presence by the ozonoscope, it seemed not to be present in the rooms of the hospital, where the windows were kept open during the day. Although these rooms were occupied, still, with the hygienic precautions mentioned, it is not reasonable to think that the air was so immediately and thoroughly vitiated, by its simple circulation through the rooms, as to lose *all* traces of ozone. Rooms that had been a month previously occupied by scorbutics, but then unoccupied, and with the windows always open, *gave to the ozonoscopes hues corresponding to degrees* 7, 8 *and* 10 *of the ozonometer;* we see thus, *that circulation through a room is not sufficient to cause any diminution of ozone in atmospheric air.* When windows are kept open all day, where cleanliness and ventilation are carefully observed, even if the rooms are occupied, circulation *alone* can scarcely rob such air of all of its ozone. We allude to this, because the position taken is somewhat an extreme one, and because the experiments, in this connection, are not sufficiently numerous to establish it conclusively. Dr. Gregory states, on this subject, that M. Schönbein "found that in storms, when the electric discharge took place *at a great distance* from where he was, he could often instantly detect ozone; *although within four walls,* and although previously the paper was quite unaffected." This statement of Dr. Gregory would go to prove, that simple cirlation through the *open rooms* of an inhabited house does not render such atmosphere less vitalizing and healthy than that which circulates without the house; that it does not *deprive* it of its ozone. The experiment made with the atmosphere of the hospital ward, in which a month previously scorbutics were placed, but which was at the time of the experiment open and well ventilated, goes to show that circulation of the atmosphere, through rooms in this condition, does not even *diminish* the amount of its ozone. It would be more prudent to demand farther proof before assuming that atmosphere circulating through clean and well ventilated rooms, the windows of which are open all day, is deprived of its ozone from the simple fact that these rooms are occupied by a few persons.

These points are prominently mentioned and *discussed,* on account of the *wide-spread error which prevails upon the subject, that the simple entrance of atmosphere into an inhabited house deprives it of its ozone.*

A chief part of the basis of Dr. Fountain's argument, to prove that ozone is nascent oxygen, consists of this undoubted fallacy, "that ozone is not found within doors, except in very slight traces, and generally not at all, however well ventilated the building may be." The experiments at the hospital at Metz by M. Scoutetten, those at Versailles by Bérigny, and the declarations of M. Schönbein, on the authority of Dr. Gregory of Edinburgh, not to mention other authorities, we certainly think prove to us that this *general* impression is groundless, and such a statement an utter fallacy. Granting it to be true, however, it only proves how very poisonous the unventilated dwelling must be when we see such results characterizing rooms that are ventilated; how dangerous to health the unwatched associating of human beings together must frequently be; and what a generator of disease and death all city atmospheres inevitably become.

The agency of ozone, in the prevention or production of disease, has been assailed on the ground that this agent is not present in sufficient quantity for accomplishing the results claimed. It is needless to say that these objections were only made before the great natural sources of ozone had been indicated, and that, at present, its existence, in quantities more than sufficient for the accomplishment of such results, is no longer denied. Seeing, then, that it were more than folly to deny its diffusion in all atmospheres, and having shown the stupendous scale on which it is ever being generated, we will proceed to consider its interesting relations to the existence of disease; and first, its relations to malarial diseases.

After all that has been written on this subject, the true nature of malaria is not yet understood. The theories of McCullough and Ferguson, Dwight, Mitchell and others, have, so far, only served to make us confess a total ignorance in reference to the subject of which they each so interestingly wrote. This subtle poison we can only recognize in its effects; its cause, nature and essence are yet wrapt in the mists of a vague hypothesis; it is the toxic apocrypha; the mysterious hieroglyphic, which, transcribed by Nature's hand, has not yet found its Champollion. "It settles over thin and barren soils, and over wastes that have been from all times desolate; over places in which southern suns ripen delightful gardens, and about the sites of cities in which the pomp of palaces has passed away." Whether amid the majestic highlands of the Hudson, or the sunny everglades of Florida; the gold sparkling quartz-rocks of California, or the rolling prairies of Illinois; the fens of England, or the arid sands of Holland; the broken arches of Rome, or the ruined marbles of Greece; the pioneer cottages of Iowa, or the growing hamlets of Australia; its history is ever the same, its obscurity inilluminable. Malaria is a subject which the profession has everywhere to encounter; a subject which, carefully studied and scientifically investigated, in all latitudes, gives yet but one result—an unbroken record of failure and disappointment. Whatever its composition, however, it is quite sufficient for us that its existence in the atmosphere is incompatible with health, and that, in ozone, we recognize the agent which alone is able to neutralize and destroy it. Ozone is able to destroy malaria, for no deleterious substance is found in any atmosphere conspicuously manifesting its presence. Where ozone is, malaria is not; and where malaria is found, ozone has been consumed. Being the most rapid oxidizer known, it is capable of destroying (as far as its supply goes) all the noisome and pestilential exhalations which generate idio- and koino-miasmata. It should be recollected, that ozone is generated in less quantities in dry atmospheres, and that its supply is less under high temperatures.

The deduction here is manifest. Ozone is elaborated at all seasons; but where poisonous emanations abound, it is largely consumed; where dryness and heat of atmosphere coincidently exist, the supply of ozone is small. Ozone, in summer, is elaborated, but poisonous emanations then most abound, and it is of course largely consumed; in summer, the dryness and heat of the atmosphere conspire to lessen the supply of ozone. The natural consequence of all this is, that where the consumption of ozone is increased and the supply diminished, it must at such times cease in a great measure to exist; and that we should suffer from the atmospheric poisons which most prevail in the absence of ozone. Among the most prominent of such poisons is malaria. Where malaria prevails and the ozonoscope remains unaltered, all of the diseases consequent upon malaria soon demonstrate to us the direct relation which ozone, manifestly, bears to malarial diseases. It follows, from the converse of this reasoning, that ozone should be greatest in winter, when its supply is largest and its consumption least; observation has proved that such is the case. Ozone, then, being least formed and most consumed in summer, when at the same time all pestilential and malarial exhalations abound, it is evident that countries which most generate such exhalations must be chiefly subject to the diseases which result from them, and that these diseases must prevail most in summer. The history of every country proves that such is always the case. It is known that though all soils are subject to malarial influences, such influences almost peculiarly belong to alluvial soils. It is therefore manifest why alluvial soils should be unhealthy, and why, when we have a coincidence of high solar heat with alluvial soil, malarial diseases should be malignant.

[To be continued.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 13, 1864.

THE BRITISH ASSOCIATION. THE NATURE OF THERMAL WATERS.—The annual meeting of the British Association has become an event of great interest and importance to all scientific men, particularly to us in the United States, where science is no longer represented by our own National Society or by the American Medical Association. To it, therefore, and to kindred bodies in France and Germany, we look for information concerning the progress made from year to year both in our own profession and in science in general, and we think it a matter worthy of immediate consideration, whether a fresher life and wider influence might not be given to our Medical Society by making it a part, or section, of one general National Association, which should comprise all branches of knowledge, and bring into a closer acquaintance our distinguished men of science. When we consider in fact the intimacy of the relationship which now binds our own art to other sciences, and its ever widening boundaries, we can well understand the fitness of the arrangement which in other countries thus unites under one common association all students of Nature in its widest sense.

The meeting this year was held at Bath, and the President, Sir Charles Lyell, prompted by the celebrated natural phenomena of the place, devoted a portion of his inaugural address to a consideration of the nature of hot springs, and the laboratory where our favorite mineral waters are manufactured by the wholesale. We would like to give in full this portion of the admirable address of this distinguished naturalist, but our space will admit of but a few extracts.

"One of our former presidents, Dr. Daubeny, has remarked that nearly all the most celebrated hot springs of Europe, such as those of Aix-la-Chapelle, Baden-Baden, Naples, Auvergne, and the Pyrenees, have not declined in temperature since the days of the Romans; for many of them still retain as great a heat as is tolerable to the human body, and yet, when employed by the ancients, they do not seem to have required to be first cooled down by artificial means. This uniformity of temperature, maintained in some places for more than 2000 years, together with the constancy in the volume of the water, which never varies with the seasons, as in ordinary springs, the identity also of the mineral ingredients which, century after century, are held by each spring in solution, are striking facts, and they tempt us irresistibly to speculate on the deep subterranean sources both of the heat and mineral matter. How long has this uniformity prevailed? Are the springs really ancient in reference to the earth's history, or, like the course of the present rivers and the actual shape of our hills and valleys, are they only of high antiquity when contrasted with the brief space of human annals? May they not be like Vesuvius and Etna, which, although they have been adding to their flanks, in the course of the last 2000 years, many a stream of lava and shower of ashes, were still mountains very much the same as they are now in height and dimensions from the earliest times to which we can trace back their existence? Yet, although their foundations are tens of thousands of years old, they were laid at an era when the Mediterranean was already inhabited by the same species of marine shells as those with which it is now peopled; so that these volcanoes must not be regarded as things of yesterday in the geological calender.

"Notwithstanding the general persistency in character of mineral waters and hot springs ever since they were first known to us, we find, on inquiry, that some few of them, even in historical times, have been subject to great changes. These have happened during earthquakes which have been violent enough to disturb the subterranean drainage and alter the shape of the fissures up which the waters ascend. Thus, during the great earthquake at Lisbon in 1755, the temperature of the spring called La Source de la Reine, at Bagnères de

Luchon, in the Pyrenees, was suddenly raised as much as 75° F., or changed from a cold spring to one of 122° F., a heat which it has since retained. It is also recorded that the hot springs at Bagnères de Bigorre, in the same mountain chain, became suddenly cold during a great earthquake which, in 1660, threw down several houses in that town.

"It has been ascertained that the hot springs of the Pyrenees, the Alps, and many other regions are situated in lines along which the rocks have been rent, and usually where they have been displaced or 'faulted.' Similar dislocations in the solid crust of the earth are generally supposed to have determined the spots where active and extinct volcanoes have burst forth; for several of these often affect a linear arrangement, their position seeming to have been determined by great lines of fissure. Another connecting link between the volcano and the hot spring is recognizable in the great abundance of hot springs in regions where volcanic eruptions still occur from time to time. It is also in the same districts that the waters occasionally attain the boiling temperature, while some of the associated stufas emit steam considerably above the boiling-point. But, in proportion as we recede from the great centres of igneous activity, we find the thermal waters decreasing in frequency and in their average heat, while, at the same time, they are most conspicuous in those territories where, as in Central France or the Eifel in Germany, there are cones and craters still so perfect in their form, and streams of lava bearing such a relation to the depth and shape of the existing valleys, as to indicate that the internal fires have become dormant in comparatively recent times. If there be exceptions to this rule, it is where hot springs are met with in parts of the Alps and Pyrenees which have been violently convulsed by modern earthquakes.

"To pursue still further our comparison between the hot spring and the volcano, we may regard the water of the spring as representing those vast clouds of aqueous vapor which are copiously evolved for days, sometimes for weeks, in succession from craters during an eruption. But we shall, perhaps, be asked, whether, when we contrast the work done by the two agents in question, there is not a marked failure of analogy in one respect—namely, a want, in the case of the hot spring, of power to raise from great depths in the earth voluminous masses of solid matter corresponding to the heaps of scoriæ and streams of lava which the volcano pours out on the surface. To one who urges such an objection it may be said that the quantity of solid as well as gaseous matter transferred by springs from the interior of the earth to its surface is far more considerable than is commonly imagined. The thermal waters of Bath are far from being conspicuous among European hot springs for the quantity of mineral matter contained in them in proportion to the water which acts as a solvent; yet Professor Ramsay has calculated that, if the sulphates of lime and soda, and the chlorides of sodium and magnesium, and the other mineral ingredients which they contain, were solidified, they would form in one year a square column nine feet in diameter, and no less than 140 feet in height. All this matter is now quietly conveyed by a stream of limpid water, in an invisible form, to the Avon, and by the Avon to the sea; but if, instead of being thus removed, it were deposited around the orifice of eruption, like the siliceous layers which encrust the circular basis of an Icelandic geyser, we should soon see a considerable cone built up, with a crater in the middle; and, if the action of the spring were intermittent, so that ten or twenty years should elapse between the periods when solid matter was emitted, or (say) an interval of three centuries, as in the case of Vesuvius between 1306 and 1631, the discharge would be on so grand a scale as to afford no mean object of comparison with the intermittent outpourings of a volcano.

"Dr. Daubeny, after devoting a month to the analysis of the Bath waters in 1833, ascertained that the daily evolution of nitrogen gas amounted to no less than 250 cubic feet in volume. This gas, he remarks, is not only characteristic of hot springs, but is largely disengaged from volcanic craters during eruptions. In both cases he suggests that the nitrogen may be derived from atmospheric air, which is always dissolved in rain-water, and which, when this water penetrates the earth's crust, must be carried down to great depths, so as to reach the heated interior. When there, it may be subjected to deoxidating processes, so that the nitrogen, being left in a free state, may be driven upwards by the expansive force of heat and steam, or by hydrostatic pressure. This theory has been very generally adopted, as best accounting for the constant disengagement of large bodies of nitrogen, even where the rocks through which the spring rises are crystalline and unfossiliferous. It will, however, of course be admitted, as Prof. Bischoff has pointed out, that in some places organic matter has supplied a large part of the nitrogen evolved.

"Carbonic-acid gas is another of the volatilized substances discharged by the Bath waters. Dr. Gustav Bischoff, in the new edition of his valuable work on chemical and physical geology, when speaking of the exhalations of this gas, remarks that they are of universal occurrence, and that they originate at great depths, becoming more abundant the deeper we penetrate. He also observes that, when the silicates which enter so largely into the composition of the oldest rocks are percolated by this gas, they must be continually decomposed, and the carbonates formed by the new combinations thence arising must often augment the volume of the altered rocks. This increase of bulk, he says, must sometimes give rise to a mechanical force of expansion capable of uplifting the incumbent crust of earth; and the same force may act laterally so as to compress, dislocate, and tilt the strata on each side of a mass in which the new chemical changes are developed. The calculations made by this eminent German chemist of the exact amount of distension which the origin of the new mineral products may cause, by adding to the volume of the rocks, deserve the attention of geologists, as affording them aid in explaining those reiterated oscillations of level—those risings and sinkings of land—which have occurred on so grand a scale at successive periods of the past. There are probably many distinct causes of such upward, downward and lateral movements, and any new suggestion on this head is most welcome; but I believe the expansion and contraction of solid rocks, when they are alternately heated and cooled, and the fusion and subsequent consolidation of mineral masses, will continue to rank, as heretofore, as the most influential causes of such movements.

"The temperature of the Bath waters varies in the different springs from 117° to 120° F. This, as before stated, is exceptionally high, when we duly allow for the great distance of Bath from the nearest region of active or recently-extinct volcanoes and of violent earthquakes. The hot springs of Aix-la-Chapelle have a much higher temperature—viz., 135° F., but they are situated within forty miles of those cones and lava-streams of the Eifel which, though they may have spent their force ages before the earliest records of history, belong, nevertheless, to the most modern geological period. Bath is about 400 miles distant from the same part of Germany, and 440 from Auvergne—another volcanic region, the latest eruptions of which were geologically coeval with those of the Eifel. When these two regions in France and Germany were the theatres of frequent convulsions, we may well suppose that England was often more rudely shaken than now; and such shocks as that of October last, the sound and rocking motion of which caused so great a sensation as it traversed the southern part of the island, and seems to have been particularly violent in Hertfordshire, may be only a languid reminder to us of a force of which the energy has been gradually dying out. * * *

"If we adopt the theory already alluded to—that nitrogen is derived from the deoxidation of atmospheric air carried down by rain-water —we may imagine the supply of this water to be furnished by some mountainous region, perhaps a distant one, and that it descends through rents or porous rocks till it encounters some mass of heated matter by which it is converted into steam and then driven upwards through a fissure. In its downward passage the water may derive its sulphate of lime, chloride of calcium, and other substances from the decomposition of the gypseous, saline, calcareous, and other constituents of the rocks which it permeates. The greater part of the ingredients are common to sea-water, and might suggest the theory of a marine origin; but the analysis of the Bath springs by Merck and Galloway shows that the relative proportion of the solid matter is far from agreeing with that of the sea, the chloride of magnesium being absolutely in excess—that is, 14 grains of it per gallon for 12 of common salt; whereas, in sea-water, there are 27 grains of common salt, or chloride of sodium, to 4 of the chloride of magnesium. That some mineral springs, however, may derive an inexhaustible supply, through rents and porous rocks, from the leaky bed of the ocean, is by no means an unreasonable theory, especially if we believe that the contiguity of nearly all the active volcanoes to the sea is connected with the access of salt water to the subterranean foci of volcanic heat."

"Professor Bunsen, of Heidelberg, led the way, in 1860, in the application of the spectrum analysis to the hot waters of Baden-Baden and of Dürkheim in the Palatinate. He observed in the spectrum some colored lines of which he could not interpret the meaning, and was determined not to rest until he had found out what they meant. This was no easy task, for it was necessary to evaporate fifty tons of water to obtain 200 grains of what proved to be two new metals. Taken together, their proportion to the water was only as one to three million. He named the first cæsium, from the bluish-grey lines which presented in the spectrum; and the second rubidium, from its two red lines. Since these successful experiments were made, thallium, so called from its green line, was discovered in 1861 by Mr. Crookes; and a fourth metal named indium, from its indigo-colored band, was detected by Prof. Richter, of Freiberg, in Saxony, in a piece of zinc ore of the Hartz. It is impossible not to suspect that the wonderful efficacy of some mineral springs, both cold and thermal, in curing diseases, which no artificially prepared waters have as yet been able to rival, may be connected with the presence of one or more of these elementary bodies previously unknown; and some of the newly-found ingredients, when procured in larger quantities, may furnish medical science with means of combating diseases which have hitherto baffled all human skill."

BANTINGISM AND STIMULANTS.—A friend has suggested to us that in our notice of Bantingism in the last JOURNAL but one, we did not remark as pointedly as we might upon the free use of stimulants recommended by the reduced fat gentleman. He recommends two or three glasses of good claret, sherry or Madeira at dinner, a glass or two of claret at supper, a tumbler of grog made with gin, whiskey or brandy, or a glass or two of claret or sherry for a night-cap, to say nothing of softening the rusk at tea with a tablespoonful of spirit; and then in the morning, on rising, a tablespoonful of a "special corrective cordial," which he calls the Balm of Life! Now this is pretty copious libation for an ascetic; and as it is barely possible that some of the numerous victims of obesity who are now trying on Mr. Banting's course of self-denial may be such literalists as to think they must drink just this amount of these fluids, and thus may be led unwittingly into a habit of positive tippling which they had never before practised, we hasten to assure them that it is by no means an important part of the system. However it may answer in England, where the habits of the people and the nature of the climate make the free use of stimulants a comparatively innocent thing, it is very certain, that with the majority of our people here the "list of drinks" recommended by Mr. B. would, if faithfully imbibed day by day, end in confirmed habits of excessive stimulation. If alcohol in all its forms is food, as some contend, and food of a highly carbonaceous character too, its free use could only tend also to intercept that blissful deliquescence, so longed for by Mr. Banting and his followers, whose sighs for diminution were long ago so touchingly put into language by the Prince of Denmark when he exclaimed,—

> "O that this too, too solid flesh would melt,
> Thaw, and resolve itself into a dew!"

One word more of explanation. In quoting from Mr. Banting, we printed the expression "those beans, such as milk, sugar, beer, butter, &c." In other places in his pamphlet he calls these articles "human beans"! Now we have heard before of a human *squash* (as in the case of the young lady who suddenly found herself in the presence of one of the vegetable monsters of this species at an Agricultural Exhibition, and raising her hands with wonder, exclaimed, "can this be a human squash!")—but we must confess the expression "human beans" is calculated to mystify the uninitiated. It is a little figure of speech of the philosophical Mr. Banting. The articles of food referred to he compares, in their effects on adults, to those caused by beans when given to a horse—good things perhaps in youth, but in adult life "detrimental as a constancy." Such food, he says, he shall call from analogy "human beans." We must say we are not much struck with the appropriateness of the figure as applied to *solid*-producing articles of diet.

Dr. Wm. M. Cornell, formerly of this city, has been appointed an Examining Surgeon for Pensions in Philadelphia, and has also received the appointment of Professor of Anatomy, Physiology and Hygiene in the Western University of Pennsylvania.

Surgeon Henry Janes, U. S. Vols., has been ordered to duty in charge of the General Hospital, Montpelier, Vt.

The Vermont Medical Society will hold its annual session at Montpelier on the 19th and 20th inst. A brief report of the doings of the meeting, from the Recording Secretary, would be thankfully received for insertion in the Journal.

The deaths in Providence, R. I., numbered 118 in September—being 13 less than in September, 1863, but 17 more than the average for September during the preceding nine years. One death from smallpox occurred in Providence in September, the first death from the disease in that city since March, 1862.

The next annual meeting of the Quarantine and Sanitary Convention will be held in Philadelphia on the 27th inst.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, October 8th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	58	61	119
Ave. mortality of corresponding weeks for ten years, 1853—1863,	46.6	42.0	88.6
Average corrected to increased population - - - -	00	00	97.4
Death of persons above 90 - - - - - - - -	0	1	1

Books Received.—The Book of Prescriptions, containing 3000 Prescriptions, collected from the Practice of the most eminent Physicians and Surgeons, &c. By Henry Beasley. Philadelphia: Lindsay & Blakiston.—The Comprehensive Medical Dictionary; containing the Pronunciation, Etymology and Signification of the Terms made use of Medicine and the kindred Sciences, &c. By J. Thomas, M.D. Philadelphia: J. B. Lippincott & Co.—The Functions and Disorders of the Reproductive Organs in Childhood, Youth, Adult Age and Advanced Life, &c. By Wm. Acton, M.R.C.S., &c. Philadelphia: Lindsay & Blakiston.

Married,—In this city, 6th inst., Dr. Henry F. Aten, of Dedham, to Miss Elizabeth W. Mills, of Boston.—In South Boston, 5th inst., Robert Provan, M.D., to Miss Carrie A. Mann, both of South Boston.—At Quincy, 9th inst., T. F. Sumner, M.D., to Miss Henrietta C. Aglar, of Quincy.

Died,—At New York, 9th inst., Dr. A. B. Snow, Surgeon 1st Corps New York Engineers, for many years a resident of this city.—At Jacksonville, Fla., Aug. 16th, Acting Assistant Surgeon John M. Whitney, of the U. S. Steamship Norwich, formerly of this city, aged 22.

Deaths in Boston for the week ending Saturday noon, Oct. 8th, 119. Males, 58—Females, 61.—Accident, 4—anæmia, 1—apoplexy, 2—asthma, 1—inflammation of the bowels, 2—disease of the brain, 3—inflammation of the brain, 1—bronchitis, 3—cancer, 3—cholera infantum, 7—consumption, 19—convulsions, 2—croup, 1—diarrhœa, 10—diphtheria, 3—dropsy, 2—dropsy of the brain, 4—dysentery, 2—erysipelas, 1——bilious fever, 1—scarlet fever, 1—typhoid fever, 11—gastritis, 1—disease of the heart, 2—homicide, 1—infantile disease, 4—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 3—inflammation of the lungs, 6—marasmus, 6—old age, 2—paralysis, 1—premature birth, 1—puerperal disease, 1—smallpox, 2—unknown, 3.

Under 5 years of age, 61—between 5 and 20 years, 7—between 20 and 40 years, 21—between 40 and 60 years, 10—above 60 years, 20. Born in the United States, 87—Ireland, 26—other places, 6.

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PAINLESS DELIVERY. HÆMORRHAGE. TURNING. RECOVERY.

By Walter Channing, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

Sept. 25th, 1864.—Mrs. ——, æt. 40, multipara, had passed, as was supposed, four weeks beyond the natural term of pregnancy. At about 4, A.M., of the above date, she rose to pass water, having not felt the least uterine action. Along with the urine there was a rush of a fluid, which was at once followed by extreme faintness. She was lifted into bed, and the flowing continuing, the vessel was examined, and was found nearly filled with blood. I was called, and living near, soon reached the address. I found Mrs. —— still faint, but the hæmorrhage had ceased. She had in a former labor been seized with faintness, accompanied by hæmorrhage. I was then called in consultation. The labor having advanced, delivery was effected by the forceps. For the distress, stimulants were given at once, and fair reaction followed.

Upon examination in the present labor, the os uteri was found soft and dilatable. The placenta did not present. Thinking I might need aid, I sent for my friend, Dr. F. Minot, who living near, soon arrived. Hæmorrhage occurred soon after, and it was agreed that delivery should be at once attempted. Having before inhaled ether, she desired to inhale it again. This she did, and during fair etherization the child was turned. Ether was asked for, not on account of pain or suffering from uterine contraction, but because of the pain which accompanied the attempt to pass the hand into the vagina before functional dilatation or dilatability had occurred in the os externum. I have not met with a case in which turning was done with more ease, until the head was about to pass the os. This then contracted, and was evidently descending with the head behind it. Dr. Minot was now desired to pass his hand into the vagina, and support the os while an extracting effort was made. He did this, and dilatation soon occurring, the delivery was accomplished with great ease—the child, membranes and placenta coming away together. The child did not breathe at first, but soon a faint but distinct cry was heard coming from the confused mass which had just been delivered. Upon admitting air freely to the child, respiration was at once fully established. The child, a female, weighed nine pounds.

The womb contracted well, but relaxation followed, with accompanying hæmorrhage. A firm compress and binder were at once employed, and the tampon introduced. It was necessary to use brandy freely, as slight bleedings occurred, which were always accompanied by failing pulse and *faintness.* As I had before found much benefit from using laudanum in uterine hæmorrhage after labor, I now gave it; viz., a drachm of laudanum in three ounces of infusion of ergot, in divided doses. When hæmorrhage is pressing after delivery, and brandy has been freely given, and flowing continuing, I have given a drachm of laudanum at once, with most excellent results. An English writer, many years ago, printed a monograph on the use of laudanum in uterine hæmorrhages. His beginning dose was 80 drops. If memory serve, the name of the writer of the above work was Stuart. Not long since, a physician from the country called on me for consultation. I asked him if he had ever given laudanum in uterine hæmorrhage in or rather after labor. "Yes," said, he, with emphasis. In what doses? "A teaspoonful, and with admirable effects." In Mrs. ——'s case its effect was immediate and *permanent.* I have underscored this word, because other agents, as brandy, &c., frequently require to be repeated. May not laudanum have some specific effects upon the small vessels, stimulating them to permanent contraction, and thus saving life? Full vomiting occurred in Mrs. ——'s case, but this gave me no uneasiness, as I had seen before, in apparently hopeless cases, vomiting followed with excellent and permanent results, and where those around have supposed death to be unavoidable. The *rationale*—the strong contraction of the stomach in full vomiting is by sympathy communicated to the womb, and uterine relaxation no longer occurs.

Support of the os uteri during turning in the above case was practised from recollection of a very interesting case reported to me by my friend H. R. Storer. In his case, which was one of natural labor, the os contracted so strongly round the *neck* of the child as to make a most troublesome complication in the delivery.

Mrs. —— has not been raised from the *horizontal position* since her delivery, now full twelve days ago. She has not met with the least accident. Her recovery is making excellent progress. She is fed at all her meals—in short, does not move except by foreign aid. The reader may think me more cautious than wise. But I have heard from others, and from books, how sad and how fatal has been too early rising after labor complicated with hæmorrhages, and after operations which have been done to prevent further loss of blood. I will give a sketch of a case which may show how important is after-treatment in the cases just referred to.

Mrs. —— had inverted womb of long continuance. She was made perfectly bloodless by the flow. Its cause was not known. A friend was called in, and discovered inversion. I have been consulted in three other cases, in neither of which did the medical attendant know what caused the hæmorrhage.

My friend Dr. —— was called in, and made an examination which showed the cause of the hæmorrhage. I was asked to be present at the operation for removing the inverted organ. The operation was done. Positive orders were given not to raise the patient from the horizontal position until directed by her physician. Everything promised recovery. Three weeks had passed without accident. The ligature was daily tightened, and the womb at our last visit hung by a thread only, as the phrase is. We were suddenly called to see Mrs. ——, and found her dying. What had happened, or what had been done? "Nothing," said nurse and friends. "She was so well that we only raised her up to put on some clean clothes and arrange the bed, and she fainted away, and we cannot bring her to." She died.

Denman gives a case in which the patient, who had flowed excessively, was only raised up on her elbow to drink, when she fainted, fell back, and died.

The case which forms the subject of this paper was new to me. There was not, during its whole length, the least uterine action. At least there was no pain. And yet the placenta was entirely separated from the womb, and was lying loose in its cavity, the membranes being unbroken. We can understand how, in *placenta prævia*, the placenta may be more or less detached, merely by the development of the cervix and os which precedes labor, and how this process may be painless. But in the case reported, the placenta and membranes had been detached from the womb, and the os opened without the least consciousness on the part of Mrs. —— that any such changes had occurred; and this was her eighth child. After-pains were very slight, and the womb became unusually small, and very firm, or solid, from the time of the expulsion of the child and afterbirth. The abdomen was large—unusually large, the second morning after delivery. This was found to be owing to the distension of the bladder by urine. Its size entirely disappeared after the catheter was used. Milk formed as usual, but such was the patient's exhaustion that the child has not been nursed.

I have met with cases of *painless* labor—one patient asking me to examine, as she rather thought the child was nearly born; and I found this opinion confirmed by immediate delivery, without pain, or pain worth noticing. Such patients know when labor begins, but apparently by instinct, rather than by experience. Now my patient had not the least intimation of the existence of labor. She rose, as above said, and had frequently done so before, in her present pregnancy, to empty the bladder, and but for faintness knew of no other change from what, under similar circumstances, she had experienced before—the bladder being frequently irritable in advanced pregnancy.

Oct. 8th.—Mrs. —— is without complaint; appetite and strength good. Feels well enough to get up and walk about, but is directed to keep patiently in bed.

DR. GAILLARD'S PRIZE ESSAY ON OZONE; ITS RELATIONS TO HEALTH AND DISEASE.

[Continued from page 222.]

We can understand, also, why malarial diseases should prevail in countries previously unvisited by them. Let us explain this:—Chemical and physical agencies produce ozone; the decay, diseases and deaths of animals and plants consume it. Have the balance between the relative amounts of ozone and miasm destroyed, and disease prevails. Again, have this balance undisturbed, but introduce high solar heat, and disease also prevails. Let solar heat be no higher than usual, but have an unusual and inordinate generation of miasm, and the result is again the same. Lastly, let us have protracted and intense solar heat, with the extreme of animal and vegetable decomposition, and malarial diseases of malignant type invariably prevail; this is seen in the tropics. This balance between the chief cause and the preventive agent of such diseases, is unfortunately too little hypothetical, for its existence and disturbance is constantly seen in Southern latitudes. Ozone is manifested in the atmospheres of large pine forests. The ozonic atmosphere of villages, in such localities, is usually sufficient to protect them from malarial fevers, provided the surface of the soil be not too long neglected. Unless the decaying mass of vegetable matter on such soils be destroyed by burning it, or in some other manner, and the usually recognized sources of malaria be thus destroyed, severe forms of fever not unfrequently prevail. If these consumers of ozone be destroyed, such villages usually remain healthy, but a long neglect of this precaution soon entails its own penalty. It has been the history of most of the newly-settled States of America, that they were first remarkably healthy, that they then became unhealthy, and then returned to their original condition. It requires, apparently, very little to disturb the balance between health and disease; any of the causes enumerated being quite sufficient to produce this effect.

In moving into a "new country," the decadentia of the soil is found, though in immense mass, in a quiescent state. Let us trace the effect of settlement. The various instruments of terra-culture are soon set in motion; the decaying mass of vegetation is upturned, scattered, and, by increased exposure of surface, converted by summer suns and rains into material for the prompt and fatal generation of disease. The ozonic principle of such atmospheres is subjected to a double source of destruction—the miasm generated, and the decaying vegetable mass which generates such miasm. Malarial diseases are now rife. But these temporary causes are removed; decay takes place, vegetation is soon resolved into its primitive elements, and banished health returns again. In alluvial soils, these causes are permanent, and with the existence of permanent causes we have permanent effects, in malarial diseases constantly manifested. In tropical regions, where we have an exaggeration of these evils, malarial fevers prevail at all seasons and with great malignity.

The remarkable properties of ozone explain to us the cause of that marked mitigation of symptoms, in such fevers, on the supervention of a thunder storm. The oxidizing properties of ozone make intelligible the existence of malarial diseases in ferruginous localities—as in India. After a thunderstorm, the mephitic exhalations of the atmosphere are destroyed. In the iron districts, the peculiar soil rapidly consumes, by oxidation, the ozone generated. We have thus shown that the dangerous accumulation of miasm is prevented by ozone, whilst the pernicious concentration of ozone is diminished by miasm; that miasm being productive of malarial fevers, any agent, capable of destroying or diminishing it, bears, by its proportionate presence or absence, the closest relation to the existence and malignity of such fevers; *that the causes generating ozone, or the supply of ozone, are least in summer; that the consumption of ozone is greatest in summer; that the effect of these causes is the absence of ozone; that the absence of ozone coincides with the existence of malarial fevers; that the existence of such fevers is in a direct ratio with the presence or absence of ozone; and finally, that there is thus established a convincing evidence of the relation of ozone to malarial fevers.* This, at least, has been the object of the few last pages. It may be urged, however, that these are but declarations, or even speculations, and that to produce conviction they should be fortified by evidence and testimony. An increasing scepticism, in the profession, has at least accomplished this important result, that theory and hypothesis are no longer attractive, and that fact and testimony are made the great touchstone for all that is offered for currency. We then exchange reasonings and deductions, in establishing this position, for the materials now so rigidly demanded, and offer in their place testimony and fact. These could be given in detail and endorsed by a long list of authorities, but we will state them briefly and concisely, as the evidence is sufficient to produce conviction in the minds of the most sceptical.

Boeckel's tables show that the presence of malaria coincides with the zero of the ozonometer, and his tables only reflect his published opinions. He is one of the oldest, best and most reliable of European investigators. The experiments and records of Scoutetten establish the same fact. MM. Schönbein, Bérigny, Wolf, Simonin and others have all adopted the same views; their tables and observations have demonstrated the truth of this position. Our own experiments and those of one other American observer give the same results. We advocated this view seven years ago. We have received from Capt. Pope, of the United States Army, a most interesting and valuable meteorological table (in manuscript) in regard to the same subject. These tables give the registers of the barometer, thermometer, hygrometer and ozonometer together; with marginal observations on clouds, wind, rain, color of sky, &c., that serve as valuable aids in the study and analysis of all that is recorded. A part of these observations Capt. Pope made at Indianola, Texas; a second part, on the march from the Gulf of Mexico to the higher table lands of the Continent; and the remaining portion, at an altitude of 3,900 feet above the level of the sea, in the open table lands, seventy miles east of the most easterly chain of the Rocky Mountains. These observations are interesting on account of the vast area traversed whilst they were made; as being taken from a section of country but little known to science, and, lastly (which is of the most consequence), on account of the important results they afford. As long as Capt. Pope was on the Gulf coast and in a malarial atmosphere, the register of the ozonometer was never over 2, 3, or 4; most of the time (almost the whole time) at 1; occasionally at 2, and very rarely indeed at 3.

On no section of the American country would one wishing to examine the relations of ozone to malaria be so desirous of making his observations as on the lands bordering the Gulf of Mexico. Most of these observations were made at Indianola, Texas, on Metagorda Bay. Boeckel's testimony is, that the existence of malaria coincides with the zero of the ozonometer; Capt. Pope's tables show, that in the malarial regions of Texas (and we could desire no better type) the *ozonometer almost constantly registered* 1; *at times* 2, *and occasionally* 3. Capt. Pope leaves Indianola on the 6th of April (when ozone should be abundant and malaria comparatively absent), *the ozonometer registering* 2; *his march is towards the high table lands.* On the 11th of the month *the register is at* 4; *on the* 16*th, at* 5; *on the* 21*st and* 23*d, at* 7 *and* 8; *on the* 25*th of April we find it at* 10.* These figures, just given, convey a clearer and more convincing lesson than volumes of theory; they suggest the entire truth belonging to the subject. They tell what a foot note, accompanying the tables, uselessly explains—that the march was from the malarial low lands of Texas to the pure atmospheres of the table lands. About the 1st of May the march is across "the deep valley of Devil's river; heavy growth of timber and rank vegetation." Is there any change in the ozonometer during the march across this malarial valley? It sinks at once from 10 to 5; then to 3; then to 2, where it remains. In emerging from this spot, on the 4th of May, the register is at 3 again; on the 6th of May it rises to 6; and on the 7th and 8th it is where it was before entering this locality, at 10. The ozonometric record gives, without explanation, the history of this transit; *it tells its own story.*

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* We have all of these tables in manuscript, but they are too voluminous to introduce into an essay of this kind; if ever necessary, they could be submitted in the form of an appendix.

But it may be claimed that this is all accidental, a coincidence that might possibly occur; that the deductions made are partial, or at least premature. Let us examine farther, and go to the record for further proof. From the time last mentioned, the register varies, 6, 7, 8, 5, 6, according to the circumstances of the march. About the 21st to the 24th of the same month, the register suddenly falls to 3. Is there any cause for this? In the margin of the tables, we read that the march is now through the valley of the Pecos river. On the 25th, this is almost accomplished; the register is now at 5; the valley is passed, and on the 26th and 27th the register is again at 9. Is this accidental again; is it another coincidence; or does the candid mind of the reader induce him to exclaim, it is the clearest and best of proof? From this time onward the observations were made exclusively on high table lands, where the atmosphere is clear, pure and bracing. We find now that the ozonometric record is almost always at 8, 9 and 10, seldom as low as 6; but three times at 5, and *never once below this.* This embraces a period, from the time of leaving the valley of the Pecos river to the 31st of August. This last period gives the record of the atmosphere in these localities, at the most interesting period of the year, in connection with our subject. In the low malarial lands and valleys, the ozonometer registered 1 to 5; in the table lands it registered 7 to 10, and occasionally 5. In these regions the cold weather soon makes its appearance after this period, and of course the ozonometrical record would be uninteresting, in its relations to malaria. It is sufficient to say, that after this time it remains most of the time above 7 and 8. If, in summer, the record in these localities (on the table lands) is on a moving scale from 7 to 10, we cannot expect, in winter, that it would be otherwise than just mentioned, steadily above 7 and 8. In the malarial period of the year, we find the ozonometer seldom registering more than 2 or 3; at Indianola, even as early as April 6th, it registers only 2. The table-land atmospheres, even in July and August, gave a record of 7 to 10.

These facts are taken from the statistics made at Indianola and on the high table lands adjoining. They need no farther comment than to again draw attention to the striking changes manifested during the transit of the malarial valleys mentioned. We have thus introduced testimony and fact, and leave these to speak for themselves.

Capt. Pope writes, that the inhabitants of these table lands enjoy a marked and unusual degree of health; we know what the malarial fevers of Texas are. If it can possibly be objected, that these observations extend over a very limited period of time (as is apparent), we will, in answer, quote from one of Capt. Pope's autograph letters, December, 1859. "The observations which I send were all carefully made, and they will perhaps answer your purpose; those of the subsequent years are almost identical. I have made several journeys across the Great Plains, and have made these observations both going and returning, and they exhibit, in all cases, precisely the results set forth in this paper." The tables sent were made in 1855, and were confirmed by others made in 1856, 1857, 1858, and 1859. Capt. Pope writes, that in his experience "ozone increases in quantity, rapidly and regularly, in receding from the low lands which border the Gulf of Mexico, and is greatest on the summit of the table lands, in the interior. On the low lands, animal and vegetable decomposition is rapid; on the table lands, extremely slow, and with little escape of offensive gases. This difference is manifest, even *when the thermometer marks the same temperature in both regions.* There is but little moisture on the table lands, as the tables show, while there is a great deal on the lands bordering the Gulf of Mexico." On account of this fact of moisture, there should be more ozone in the atmosphere of the low lands than in that over the high table lands; for it is claimed by most observers that moisture is eminently favorable to the production of ozone.

Dr. Smallwood, of Montreal, Canada East, states that "three thousand observations confirm this truth—that ozone is not formed unless the vapor of water be present." When moisture is excessive, as in the low lands of Texas, we can appreciate how great must be the malarial destruction of ozone, and why it is that in such places malarial fevers must become prevalent and malignant. Capt. Pope's carefully and scientifically prepared tables show that it is *not necessary* that there should be any *great deal* of atmospheric moisture to admit of an extensive generation of ozone. His ozonometer frequently gives 8, 9 and 10, when the hygrometer shows that the atmosphere is not damp; though the high registers of the ozonometer most frequently coincide with the damp registers of the hygrometer. In the high table lands a moist atmosphere almost always attends an abundant manifestation of ozone, and conversely; whilst in the low lands both dry and damp atmospheres exhibit but a feeble presence of ozone. Dr. Smallwood's declaration, based on "three thousand" experiments in this connection, is in the main true, "that ozone is not formed unless the vapor of water be present," though Capt. Pope's tables unquestionably demonstrate the fact that it is not necessary that this vapor of water should be so abundant as to constitute dampness in the atmosphere; *for on those high table lands, in the months oj July and August, when the hygrometer did not demonstrate a damp atmosphere, the ozonometer recorded* 8, 9, 10 *of the scale.* That a damp atmosphere is favorable to the production of ozone, however, both of these and all other observers testify. Where malarial atmospheres are damp and the ozonometer is at zero, the deduction is irresistible that ozone has been formed and destroyed.

We are then prepared to admit, from theory and fact, that there is a demonstrable relation between malaria and ozone; between the presence of ozone and the absence of malarial fevers; between the existence of malarial fevers and the absence of ozone. Before passing on to consider another branch of our subject, we will give another quotation from Capt. Pope's letters, as furnishing interesting information relative to the physical and meteorological conditions of these high table lands; information that is in some respects original, and, in every respect, authentic and reliable.

"On the table lands of this continent (New Mexico and elsewhere) there are few if any swamps; the vegetation is extremely sparse, and very imperfectly developed. Forests are rare, except those of pine and cedar, as found on the mountains, and there the trees are stunted and dwarfed. The grass of the table lands is very short, and rarely grows more than three or four inches high. Animal and vegetable decomposition is very slow in its action, and attended with little escape of offensive gases. Very little moisture is found in the atmosphere, and the rain-fall is not one fourth what it is in the driest regions east of the Mississippi. Pulmonary diseases are almost unknown. It is worthy of remark, that in New Mexico (the only inhabited portion of the table lands) smallpox, measles and other cutaneous diseases are almost innocuous; it being very common to see, in the villages, children playing in the streets, while suffering under the worst forms of confluent smallpox. It is but rarely that any marks of the disease are left, and the disease is milder than in any part of the United States. The same may be said of measles, &c.

[To be continued.]

ON THE FUNCTIONS OF THE CEREBELLUM.

By William Howship Dickinson, M.D., Cantab., Curator of the Pathological Museum, St. George's Hospital.

(Abstract.)

The paper is divided into two Parts: the first gives the results of experiments on animals; the second, of observations upon the human being.

Part I.—Assuming that the great divisions of the brain preserve each the same function through the vertebrate kingdom, it is maintained that experiments which can be performed only on such of the lower animals as are very tenacious of life, will afford deductions of universal application.

The method of proceeding with regard to each species was to remove, first, the whole encephalon, with the exception of the medulla oblongata; then in a similar animal only the cerebrum was taken away. The only difference between the two cases was in the fact that one animal had a cerebellum, and the other had not. A comparison was believed to show, in the powers which one had more than the other, the function of the organ the possession of which constituted the only difference.

Finally, it was ascertained in each species what is the effect of taking away the cerebellum alone.

The use of the organ was thus estimated in two ways—by the effect of its addition to the medulla, and of its subtraction from the rest of the nervous system.

The species so treated are arranged in an ascending scale, according to the comparative weight of the cerebellum. The field-snake, frog, salamander, toad, land-tortoise, eel, water-tortoise, pike, perch, tench, dace, carp, gold-fish, rudd, loach, and gudgeon were subjected to these operations; besides which, many experiments of a less systematic character were made upon birds and mammalia.

The results are these:—

In Reptiles, with the exception of the snake, the cord, together with the medulla oblongata, is sufficient to give the power of voluntary or spontaneous motion—limited, but usually enough to allow of feeble locomotion.

With the addition of the cerebellum, all actions dependent on the will appear to be naturally performed.

The removal of the cerebellum shows that the cerebrum by itself is unable to give more than a limited amount of voluntary motion, and that of a kind deficient in balance and adjustment.

It is therefore inferred that the cord, together with the medulla oblongata, is a great source of spontaneous motor power, in which function both the cerebrum and the cerebellum take part, the cerebellum to the greater extent; it also appears that a certain harmony in the use of the muscles depends on the possession of the latter organ.

Regarding *Fishes*, the cord and medulla oblongata seem unequal to the performance of voluntary motion.

When the cerebellum is added, the powers become so far extended that movements are made in obedience to external stimuli. Generally speaking, a determined position is maintained and locomotion accomplished, without the use, however, of the pectoral fins.

If the cerebellum only be taken away, there is a loss of the proper adjustment between the right and left sides; so that oscillation or rotation takes place. All the limbs are used, but apparently with a deficiency of sustained activity.

It is therefore concluded that with fishes, as with reptiles, the power of intentional movement is shared by both cerebrum and cerebellum; the former in this case has the larger influence.

Such movements as depend on the cerebrum are destitute of lateral balance, are sudden in being affected by any external cause, and are emotional in their character. Such as depend on the cerebellum are mutually adjusted, of a continuous kind, and less directly under the influence of consciousness.

The same facts were supported by experiments on the higher orders of animals; in these it seemed that the cord and medulla are insufficient to excite voluntary movements. The muscles, as with fishes and reptiles, acknowledge a double rule, from the cerebrum and from the cerebellum. The anterior limbs are most subservient to the cerebrum; the posterior to the cerebellum. The limbs on one side are in connection chiefly with the lobe of the opposite side. The absence of the cerebellum destroys the power of lateral balance.

From the negative results of the experiments, it is inferred that the cerebellum has nothing to do with common sensation, with the sexual propensity, with the action of the involuntary muscles, with the maintenance of animal heat, or with secretion.

The only function which the experiments assigned to the cerebellum is such as concerns the voluntary muscles, which receive therefrom a regular supply of motor influence. Each lateral half of the cerebellum affects both sides, but the one opposite to itself most.

The cerebellum has a property distinct from its true voluntary power, which harmonizes the action of the voluntary muscles, and has been described as "coördination."

The voluntary muscles are under a double influence—from the cerebrum and from the cerebellum. The anterior limbs are chiefly under the influence of the cerebrum; the posterior, of the cerebellum. Cerebellar movements are apt to be habitual, while cerebral are impulsive. The cerebellum acts when the cerebrum is removed, though when both organs exist it is under its control.

Part II.—From an analysis of one case of congenital absence of the cerebellum, one of disease of the whole organ, and 46 of disease of a portion of it, the following deductions are stated:—

The only faculty which constantly suffers in consequence of changes in the cerebellum, is the power of voluntary movement.

When the organ is absent or defective congenitally, we have want of action in the muscles of the lower extremities.

When the entire structure is changed by disease, we have loss of voluntary power, either general throughout the trunk, or limited to the lower limbs—which results are about equally frequent.

From the manner in which the paralysis was distributed in cases of disease of a part of the organ, it is inferred that each lobe is in connection as a source of voluntary movement with all the four limbs, but in the greatest degree with the limbs of the opposite side, and with the lower more than with the upper extremities.

The occasional occurrence of loss of visual power, and alterations of the sexual propensity, is referred to the conveyance of irritation to the corpora quadrigemina in one case, and the spinal cord in the other.

From both sources of knowledge it is concluded that the cerebellum has distinct offices.

It is a source of voluntary motor power to the muscles supplied by the spinal nerves. It influences the lower more than the upper limbs, and produces habitual rather than impulsive movements. Each lobe affects both sides of the body, but most that opposite to itself.

Secondly, the cerebellum has a power which has been described as that of "coördination," which is similarly distributed.

Finally, it is suggested that the outer portion of the organ may be the source of its voluntary motor power, while its inner layer is the means of regulating its distribution.—*Proceedings of the Royal Society.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

SEPT. 26th.—Dr. MORLAND reported the following cases, recently under his care at the City Hospital. The record was made by Dr. John Dole, resident graduate in the Medical Department.

Encephalitis in a Pregnant Woman.—Mrs. ——, 30 years old, well made, of rather full habit, the mother of three children, born at full time without any abnormal occurrence, entered the City Hospital, July 16th, 1864. When first seen, her face was deeply flushed, her eyes widely open and glassy, their pupils permanently contracted and insensible to light; the skin was hot and dry; pulse 120 per minute, full and hard; respiration 48, and of a hurried, nervous character. Tongue heavily coated in its middle, clean at the tip and edges. The patient was stated to be in the eighth month of pregnancy. The beat of the fœtal heart was distinctly heard on a line with the umbilicus, one inch and a quarter to the right of the linea alba. Patient's mind seemed confused and her articulation was hesitating and indistinct. On inquiry, it was ascertained that she had been troubled for some months with supra-orbital neuralgia, and that, thirteen days before entering the hospital, while attending the funeral of one of her children, she was suddenly seized with sharp pain in the forehead, extending backwards to the occiput, and laterally to a spot behind each ear. This pain had continued up to the time of her admission. There had been no alvine evacuation for twelve days, and no discharge of urine for thirty-six hours. Appetite small; thirst constant.

The patient was immediately put to bed, the urine drawn by the catheter, and enemata were directed. Heat was applied to the feet and ice to the head. Two leeches behind each ear.

July 17th.—No operation from enemata. Repeat. Castor oil an ounce, *statim.* Urine again drawn by catheter—fourteen ounces, dark colored and offensive. Patient complains of much pain in the temples; pulse 128. Apply leeches to seat of pain.

July 18th.—Less pain in head; two dejections from oil and enemata; pupils slightly sensible to light; no voluntary evacuation of urine; pulse 100; skin cool and moist. Ice to head, constantly.

July 19th.—Slept but little; natural evacuation of bowels and bladder. Complains of a feeling of numbness in her left side and arm; pupils more sensitive to light; pulse 96; some appetite.

The records of subsequent days show a rapid improvement in the patient's condition. Leeches were twice applied for relief of pain; the pulse gradually diminished in frequency, and improved in character. The strength was sustained by wine, beef-tea, &c., and, on the 30th of July, she left the hospital, well. She imprudently walked a long distance, and next day was ill from fatigue, but rallied immediately, and is now well.

The case, sufficiently severe in itself, derived additional interest, and, as it was thought, gravity, from the woman's condition physiologically.

Pleurisy; Thoracic Abscess, with fistulous opening; Diarrhœa; Death.—James Noble, aged 39 years, entered the Hospital July 14th, 1864. He stated that two months previously he had an attack of pleurisy on the right side, the pain being confined to a small spot under the 7th rib, and, to use his own expression, "it cut his breath." There was some cough, but no expectoration. The pain continued until the 12th of July, when it was relieved by the opening of the abscess and evacuation of the pus at its seat. A probe passed inwards and slightly upwards, over the border of the 8th rib, to the depth of 4½ inches. The patient, whose bowels had been constipated up to the time when the abscess was evacuated, was attacked with a diarrhœa which no modification of diet and no remedies could control, and which resulted fatally on the 15th of August. He was excessively emaciated, and debilitated to the last degree. On his admission, every effort was made to recruit his strength by nourishing food and tonics, but all without avail. There was probably ulceration of the bowels. No *general* necroscopic examination could be obtained. On *local* examination, *post mortem*, the upper border of the 8th rib was found necrosed for 1¾ inches from the sternal end. Beneath it was a cavity extending upwards to the 5th rib and downwards to the upper surface of the diaphragm—4½ inches in length by 2½ inches in breadth. No communication with the lungs could be found.

The patient could force pus readily through the fistulous opening by expiratory effort. Pressure and injections of iodine were employed, and the external opening was once necessarily enlarged with a bistoury, to facilitate the discharge of matter. The necrosed bone was detected by the probe during life.

SEPT. 26th.—*Ulceration of the Small Intestines, differing from the Form usually described; Perforation: Chronic Ulcers of the Stomach.*—Dr. ELLIS showed the specimen, which came from a patient who died in the Mass. Gen. Hospital, under Dr. Minot's care. He was a married man, 38 years old, a shoemaker by trade, and healthy till November, 1863, when he had, he said, an attack of dysentery, followed by diarrhœa, which continued ever since. He generally had three or four loose dejections daily. In March the stools were bloody for a time. At his entrance, Aug. 15th, he was very weak, had diarrhœa without pain, and complained of pain and tenderness in the right hypochondrium. There was a feeling of oppression and pain after taking food, on account of which chronic ulcer of the stomach was suspected. The patient also complained of much pain in the right side, on long inspiration, on account of which the decubitus was always on the left side. There was also slight cough, without expectoration, and severe night sweats. He remained tolerably comfortable, sitting up almost every day until Aug. 17th, when he had severe pain in the bowels after a dejection. The pain occurred again the next day, under similar circumstances, and was accompanied by much tenderness in the epigastrium; pulse 108. On the 19th, there was much tenderness in every part of the abdomen, much thirst, pulse 108; but the patient rested pretty well. He continued for several days in a state of prostration, the pulse gradually rising to 120, till the 22d, when he died.

The perforation probably took place on the 17th, and it is remarkable that the symptoms of peritonitis were so slowly developed, and that life was prolonged to such a degree.

At the autopsy, twenty ounces of serum, with some white fibrinous coagula, were found in the right pleural cavity. External surface of the lung covered with a pretty thick and firm layer of white fibrin, evidently not old. Old adhesions at the apex.

Just beneath the pleural surface of the upper part of the right lung were several yellow, rounded bodies, perhaps two lines in diameter, which resembled tubercle, but, if such, they were latent. Lower lobe compressed and œdematous. Two or three firm, grayish nodules in the median portion of the left lung, but none elsewhere. Lower lobe œdematous.

The peritoneal cavity contained upwards of two pints of serous pus, and a thick, yellow, curdy matter, by which portions of intestine had been glued together.

The mucous membrane of the stomach was pale. In the small curvature, nearer the pyloric than the cardiac orifice, were two chronic ulcers, with firm, smooth, sharply cut margins, and firm bases, extending apparently to the submucous cellular coat. They were regularly rounded, and about half an inch in diameter.

On inflating the intestines, air escaped from an opening, perhaps half a line in diameter, situated between six and seven feet from the pylorus. The small intestine was more or less ulcerated throughout, the ulcers being of a peculiar character. In some places there were seen small, round, white elevations, perhaps two lines in diameter, and perfectly movable with the mucous membrane. As these increased in size, ulcers formed in the centre, and the base became attached to the submucous cellular, and afterwards to the muscular coat. But little disposition was shown to penetrate the latter, the disease progressing not by the immediate destruction of the old tissues, but, rather, by the formation of a firm new material, which was afterwards destroyed by the ulcerative process. This was seen even in ulcers of large size, which could be stripped from the muscular coat, with the new material, which they occupied. Two, however, which extended entirely round the intestine, had invaded the tissues more deeply, and in one of them was the perforation above described. The ulcers were very numerous, and of all sizes, from the mere pit in the centre of the small, white elevations, to those which girdled the intestine; but in all cases the margins were firm, elevated and white. A very large one, with a deeply excavated margin, was situated only an inch below the pylorus. The bases of many were covered with a yellow, fibrinous material, and the peritoneal coat beneath some of the deepest had a somewhat fibrous or cicatrized look. Most were quite pale, but the bases of some were blackish, and the intervening mucous membrane at many points presented the dark slate color which so frequently follows chronic irritation. This was quite noticeable in the last foot, where there were no ulcers. The mucous membrane here had also a dull, diseased appearance.

On microscopic examination of the new material which formed the bed and boundary of the ulcers, it was found to be composed of fibroid tissue, some fibro-plastic elements and many small nuclei with small nucleoli, not unlike those of the mesenteric glands.

The large intestine was normal. The contents throughout were quite thin and more or less yellow.

The mesenteric glands were much enlarged, and almost white. The microscope showed that the increase of bulk was owing to the multiplication of the nuclei which belong to them.

The left lobe of the liver was quite small; its edge thin and fibrous. Substance rather pale. The gall-bladder contained a large quantity of thin bile.

Other organs normal. Head not examined.

The above case is one of great interest; for, bearing in mind the peculiarities of the disease, it is found impossible to assign to it a place among the established varieties of intestinal ulceration. An opportunity being afforded to trace the successive changes which take place, we are forced to admit that the formative process plays as active a part as the destructive, and in all probability precedes it. It is precisely what is seen elsewhere in many new growths, in which the great productive power is attended by an equally great tendency to decay. Such cases may, perhaps, be found in some periodicals, but none of the general treatises by the highest authorities describe any form of ulceration which can be recognized as similar to this.

SEPT. 26th.—*Malformed Rectum.*—Dr. WARREN showed a specimen of malformed rectum. The patient was a little girl upon whom he had operated about fourteen months since, for imperforate anus; and an account of the case may be found in a paper read before the Suffolk District Medical Society, May 28th, 1864.* In this case an opening existed between the rectum and vagina, so that the alvine discharges took place through the latter canal. The operation, which consisted in making an incision in the situation of the anus, drawing down the rectum, and stitching its margin to the integuments, was completely successful—a large and well-formed canal being established in the normal position, through which she had solid dejections, while the more liquid fæces still made their way through the vagina. On account of the age of the child, it was decided to postpone till a later period an operation for closing the communication between the rectum and vagina. The child continued well until a few weeks since, when it was attacked with gastric irritation, and died, Aug. 4th.

The following extracts from a letter from Dr. Cox, of Salem, the attending physician, give an account of the *post-mortem* appearances:—

"On Tuesday, the 2d, I first saw her. She had constant nausea, and vomited almost everything she took into her stomach, and had no alvine discharges. These symptoms continued, more or less urgently, till her death, on the 4th, except that the bowels were slightly moved several times. Independently of the state of the atmosphere of late, this condition was perhaps remotely caused by a malformation and transposition of the large intestine, in consequence of which a free and thorough evacuation of the organ seldom if ever took place. * * * * The rectum ascended from the anus to the right iliac fossa, thence up through the right lumbar region to the under surface of the liver, touching the gall-bladder. Then it bent sharply downwards, and descended, in contact and parallel with the ascending portion, to the right iliac fossa. The colon then crossed the lower part of the abdomen to the left iliac region, up through the left lumbar region, almost to the stomach. terminating in the cœcum. * * * The portion discolored with bile, from its contact with the liver, is where the sudden and abrupt bend of the organ downwards took place. This sharp flexure must have proved a serious obstruction to the evacuation of the bowel. From this turn to the caput coli the bowel was very much distended with flatus, and contained more than a quart of soft fæcal matter, of the consistency of thin mortar. The only other morbid change found was an injected and softened state of the mucous coat of the stomach."

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* See Boston Medical and Surgical Journal for July 14, 1864.

An incision being made in the back part of the rectum, near the anus, displayed a very great contraction of that organ just before its original termination in the vagina. In fact, following this contraction was a cul de sac which communicated with the vagina, about its middle, by a delicate valvular opening; the artificial anus continued the intestine down to its natural external termination. It will be understood, therefore, that instead of a free communication between the intestine and vagina, there was a plaited condition of the mucous membrane, as in the ordinary termination of the canal.

Dr. Warren called the attention of the Society to the fact, that the descending colon in this, as in one of the published cases referred to, was transposed, so that any operation for artificial anus, as usually practised in the left lumbar region, would necessarily have failed of its object. He also adverted to the very interesting fact, exemplified in the present case, and to which the attention of the Society had many years since been called by Dr. J. B. S. Jackson, viz., the very constant termination of the intestine in the vagina in cases of imperforate anus in the female. Dr. J. has also remarked that in all the cases of simple imperforate anus that he has examined in the male subject, a small opening has been found between the rectum and the membranous portion of the urethra; and this opening in the male he regards as analogous to the one above referred to in the female.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 20, 1864.

Communications to the Rhode Island Medical Society for the Years 1863-64.—We by no means expect from the Medical Society of our geographically but in no other sense small neighbor, Rhode Island, so voluminous a volume of transactions as we should look for from the Empire State, and so we are not disposed to make disparaging comments on the modest pamphlet of forty pages which contains the record of its proceedings for the present year. We are glad to see each State in turn, at its annual meeting, doing its part in keeping alive a spirit of professional emulation, and a desire to contribute something to the common stock of medical literature. The annual accessions to our positive knowledge from this source are getting to be in the aggregate something that the members of the profession in America may well be proud of, and every year shows a more evident purpose to make these accessions more worthy of a permanent place in the annals of medicine. Rhode Island contributes in this way for the present year but two strictly professional papers, but they are both interesting.

The first of these is a history of a case of comminuted fracture of the skull, with depression to the depth of half an inch, reported by Dr. Henry E. Turner. The operation of trephining was done several days after the accident, the dura mater being found to be perforated, admitting the first joint of the thumb into the vacancy in the cerebrum. The case terminated successfully, and Dr. Turner expresses the opinion that, although he should not feel justified in opening the dura mater under such circumstances, it was owing to the fact of such an opening existing in this and a previous case in his practice of a similar character, that recovery took place. Dr. Turner also reports a case of recovery from tetanus under treatment by opium.

The second paper is by the same author, on the Typhoid Dysentery which prevailed in Newport during the latter part of the summer and the autumn of 1863. This epidemic will be fresh in the memory of many of our readers, exciting as it did at the time such serious apprehensions and numbering among its victims some of our well-known citizens. The reputation of this watering place as a peculiarly healthy resort made the epidemic in question all the more serious to the community at large, as numbers were exposed to its influence who had come from distant homes. We have seen no attempt hitherto to explain the unusual prevalence of this disease in Newport. Dr. Turner is inclined to attribute it to an exceptional prevalence of east winds. He says:—" The prevailing wind, during the summer of 1863, instead of being, as it usually is, from the southwest, was from the east; and the weather was damp, and the heat oppressive, in a degree very seldom experienced in Newport. The declivity upon which most of the city is built fronts the west, and, of course, the southwest winds coming directly from the sea, and generally blowing hard for several hours every day, ventilate the streets and yards very thoroughly; whereas, the town is almost entirely sheltered from easterly winds, and, during their prevalence, we are unconscious of any wind at all. This may serve, in some measure, to explain the matter."

The disease was very fatal, and even where the symptoms were not severe was unusually persistent and intractable to the usual remedies. At a charitable institution known as Coasters' Harbor the mortality in six weeks was more than ten per cent of the inmates, and this in a situation " dry, elevated and airy." Whereas, in the garrison of 150 men at Fort Adams, on the other side of the harbor, and equally distant from the city proper, there was not a single case of dysentery;

although the men lived more or less irregularly, as soldiers will who have the privilege of frequent visits to a city of the size of Newport.

The disease seems to have been as capricious in its attacks as some of the epidemics of cholera and diphtheria have been, striking where we should least have looked for it, and passing over localities naturally calculated for its habitat. Thus "the localities where it most prevailed were not those where it would have been most expected; it was a very different quarter of the city, and a very different class of people which suffered, from those which were visited by the cholera in 1854. It was not, as in that case, the poor and foreign population, surrounded by privation and filth, and bad drainage and negligence; but it was the well-to-do people, in the central and respectable streets, who were the victims; and so far as I know, the wharves and poorer streets, which suffered most from cholera, were unusually free from disease."

The mortality was so great that during the months of August, September and October the average of deaths was 37 per month, whereas during the previous two years it had been but 13 per month; a very high death rate for a place usually so healthy.

A critical report, by a Committee of the State Society, on the plan of the proposed Rhode Island hospital, is an interesting feature in the publication before us. We are glad to learn that Rhode Island is to have a hospital of her own, and that its construction is to be based on such wise and mature deliberation as the report before us indicates. We have no doubt it will be a model institution.

The usual obituary notices of deceased members, and the records of business meetings, &c., complete the pamphlet.

New Use of Electricity.—The *Medical and Surgical Reporter*, of Philadelphia, describes a new application of electricity to household use, which promises to be of great public utility. The *electric bracket*, by Robert Cornelius, of that city, is designed as an attachment to the ordinary gas burner, "by which the gas may be lighted at any moment by the instantaneous production of a spark of electricity." It consists of an instrument by which simple friction of two surfaces is furnished by a movement as simple and easy as the turning of a key. The apparatus is attached to the bracket, and connected with the gas burner by a fine copper wire covered with silk, and terminating in a platinum point one sixteenth of an inch from the aperture of the burner. Merely lifting a rubber plug from its bed in a cup lined with lamb's wool and silk, which constitutes the apparatus, produces a spark which darts from the platinum point to the burner and ignites the escaping gas.

The Deaf and Dumb.—In a paper recently presented to the French Academy, Dr. Boudin gives the following curious statistics: Marriages of blood-relations form about two per cent. of all marriages in France; the deaf and dumb offspring, by birth of consanguineous marriages, are in proportion to the deaf and dumb born in ordinary wedlock—at Lyons, at least twenty-five per cent; at Paris, at least twenty-eight per cent; at Bordeaux, at least thirty per cent. 2. The proportions of the deaf and dumb, by birth, increase with the degree of blood-relationship. If the danger of having a deaf and dumb child in ordinary marriage, represented by figures, is one, there will be eighteen in marriages between first cousins; thirty-seven in marriages between uncles and nieces; seventy in marriages between nephews and aunts. 3. At Berlin we find thirty-one deaf and dumb to ten thousand Catholics, six deaf and dumb to ten thousand Protestants, twenty seven deaf and dumb to ten thousand Jews. In other words, the proportions of the deaf and dumb born grow with the facility religion affords to consanguinity in marriage. 4. In 1848, twenty-three deaf and dumb born of ten thousand whites were counted in the territory of Iowa (U. S.), and two hundred and twelve deaf and dumb among ten thousand slaves; a shocking proof how little our social, moral and religious laws are considered valid for the slaves. 5. The misfortune of being born deaf and dumb falls not always directly from parents wedded in consanguinity; it appears sometimes indirectly from marriages in which one of the parents issued from wedlock between blood-relations. 6. The most healthy parents, but related in blood, may have deaf and dumb children; while deaf and dumb parents, but not blood-related, very rarely beget deaf and dumb children. 7. The number of deaf and dumb born increases formidably in places where natural obstacles stand in the way of cross-marriages. Thus we have the proportion of the deaf and dumb, which in France in general is six among ten thousand inhabitants; in Corsica, fourteen in ten thousand; in the High Alps, twenty-three in ten thousand; in Iceland, eleven; in the Canton of Berne, twenty-eight. 8. The number of the deaf and dumb in Europe may be reckoned at about 250,000. —*Annual of Scientific Discovery.*

The American Pharmaceutical Association met in Cincinnati on the 21st ult. A large number of members from various parts of the United States were present. Mr. W. J M. Gordon, of Cincinnati, was elected President, and Mr. H. N. Rittenhouse Recording Secretary. In September of next year the Society are to meet in Boston.

At a meeting of the surgeon dentists of Boston and vicinity, last week, an association was formed, to be known as the "United States Surgeon Dentists' Protective Union," for the purpose of protecting dentists against unlawful claims on patents, and for mutual fellowship. A constitution and by-laws were adopted, and the following officers elected:—President, J. Wetherbee, D.D.S., of Boston. Vice Presidents, A. Lawrence, M.D., of Lowell, F. N. Seabury, D.D.S., of Providence. Recording Secretary, Dr. E. G. Leach, of Boston. Corresponding Secretary, E. C. Rolfe, M.D., of Boston. Treasurer, N. C. Keep, M.D., of Boston. Directors, Dr. D. K. Hitchcock, J. A. Salmon, J. McDougall, R. Cutter, E. N. Harris, of Boston; S. Mallet, New Haven; W. N. Martin, Providence; S. T. Locke, Nashua, N. H.; O. R. Port, Brattleboro'; W. F. Searle, Springfield. The Association will hold a convention in Chicago in August, 1865.

Prof. J. H. Armsby, of Albany, has again performed the operation of ligature of the subclavian artery. The patient was Maj. J. C. Kloch, of the 153d N. Y. Reg't, who was wounded by a shot in the shoulder at the battle of Winchester. On the twenty-first day after the wound, alarming hæmorrhage occurred, and Dr. A., on being sent for, applied a ligature, as above stated, to the great relief of the patient—being the second time within the year that he has performed this operation. The Major is represented as doing well.

The Medical Department of the University of Nashville, Tenn., still holds its course of instruction, chiefly under the management of Dr. W. K. Bowling.

Dr. L. P. Savery, a well-known and respected physician in Denmark, Me., was reclining in his carriage on the 10th inst., when some portion of his harness gave way, and his horse became unmanageable, throwing him out and injuring him internally, so as to cause his death in a few hours.

At the recent battle of the "Opequan," near Winchester, Va., Sept. 19th, Dr. Isaac Smith, Jr., Asst. Surg. 26th Mass. Vet. Vol., while on the field humanely attending to our heroic brave, received a severe wound in the joint of the first toe of right foot, at the metatarsal and phalangeal articulation. He is now at his father's residence in Foxboro', the wound doing well.

At the Cumberland Hospital, located about a mile and a half from Nashville, Tenn., the daily average of patients in August was 2,891; attendants, 190. Total patients and attendants, 3,081. There were washed and ironed daily, Sundays excepted, 2,500 pieces. Total cost of provisions, during the month, at Government prices, $20,996 55.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, October 15th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	49	39	88
Ave. mortality of corresponding weeks for ten years, 1853—1863,	38.3	39.2	77.5
Average corrected to increased population - - - - -	00	00	84.87
Death of persons above 90 - - - - - - - -	0	0	0

Erratum.—In the last number of this Journal, page 227, line 33 from top, for "intercept" read *interrupt*.

To Correspondents.—A letter from our Philadelphia correspondent came too late for insertion in this week's issue. Several other papers have come to hand, and will receive early attention.

Books Received.—Alcohol; Its Place and Power—By James Miller: The Use and Abuse of Tobacco—By John Lizars. Philadelphia: Lindsay & Blakiston.—Theory and Practice of the Movement-Cure, &c. By Charles Lafayette Taylor, M.D. Philadelphia: Lindsay & Blakiston.—The Philosophy of Marriage, &c. By Michael Ryan, M.D. Philadelphia: Lindsay & Blakiston.

Died,—At the Pensacola, Fla., Naval Hospital, on 1st inst., of remittent fever, Dr. Henry L. Dearing, Act'g Ass't Surg. U. S. N., attached to steamer Genesee.

Deaths in Boston for the week ending Saturday noon, Oct. 15th, 88. Males, 49—Females, 39.—Abscess, 1—accident, 1—apoplexy, 2—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 2—bronchitis, 1—cancer, 1—cholera infantum, 4—consumption, 17—convulsions, 2—diarrhœa, 3—diphtheria, 1—dropsy, 1—dropsy of the brain, 5—drowned, 1—dysentery, 1—erysipelas, 1—scarlet fever, 2—typhoid fever, 4—disease of the heart, 3—infantile disease, 1—intemperance, 1—congestion of the lungs, 1—inflammation of the lungs, 4—marasmus, 3—old age, 2—paralysis, 1—premature birth, 4—puerperal disease, 2—scrofula, 2—smallpox, 1—disease of the spine, 1—suicide, 1—unknown, 8.

Under 5 years of age, 37—between 5 and 20 years, 5—between 20 and 40 years, 20—between 40 and 60 years, 18—above 60 years, 8. Born in the United States, 53—Ireland, 28—other places, 7.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

Vol. Lxxi. Thursday, October 27, 1864. No. 13.

DIFFICULT LABOR. ARM PRESENTATION. DELIVERY BY TURNING. SUDDEN DEATH.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—If you think the following case will be of any interest to the readers of the Journal, you are at liberty to give it an insertion.

On the 4th of August, 1864, I was called to see Mrs. M., who had been in labor with strong pains for more than thirty-six hours, attended by an Irish woman who sometimes officiated as a midwife among that class of patients. Upon making an examination, I found a hand and arm in the vagina near the os externum. I made some effort to return it, but with little effect, the shoulder pressing firmly against the os tincæ by almost continued contraction of the uterus. I introduced my hand over the body of the child, far up into the uterus, with great difficulty, on account of the strong contractions of that organ. In a little time I succeeded in grasping one leg, and brought the foot down into the vagina and secured it with a wide tape; this was handed to an assistant, and I attempted to bring down the other leg and foot, but on account of the high position of the foot and the powerful contractions of the womb, I found it impossible to do so with safety. Fearing the uterus might be ruptured, I desisted for a short time.

I now left the patient for a few moments, procured some chloroform, and invited Dr. Garland to my assistance. On returning to the patient, we put about two drachms of the chloroform on a napkin, and applied it to her mouth and nose. She breathed it freely, and in a very short time was under the influence of the anæsthetic, so that the hand was readily passed, the remaining foot and leg brought down, and the turning accomplished; the expulsion of the child soon followed. The whole time, from the inhalation of the chloroform to the delivery, did not exceed fifteen or twenty minutes. The womb soon contracted, and the placenta was removed. The woman soon rallied and spoke, not having been wholly unconscious at any time. Having an urgent call I left, after applying my hand to the bowels, finding the uterus contracted in the centre of the abdomen, and ordering some stimulants and warm gruel to be given.

I was absent about an hour; and on my return, to my great surprise and astonishment, I found the woman had been dead fifteen or twenty minutes. There had been some little flooding, but not profuse. I learned by the attendants that she soon became insensible, and could not be aroused. She continued to sink, until life was extinct. I will here state that she was a healthy woman, and had borne several children.

Query.—What was the cause of death in this unfortunate case? Was it from the effect of the small quantity of chloroform; the loss of blood, which was small; or from prostration produced by the severe and long protracted labor? Will the readers of the JOURNAL who are in the habit of using chloroform in parturition (and others), give their experience and views through the JOURNAL on the use of chloroform or ether. I very seldom use it in childbirth, and therefore cannot well judge of its effects and utility. Any information on the subject would be thankfully received.

Lawrence, Oct. 8th, 1864. SENECA SARGENT.

[Of course it is impossible to decide with anything like absolute certainty what was the cause of death in the distressing case above narrated, but we will give our correspondent the benefit of our own conjectures, and we should be very glad to publish any communications from any of our readers on the subject.

The cause of death in this case was probably one of the following three, or a combination of them, namely: paralysis of the heart from the action of the chloroform; rupture of the uterus; the hæmorrhage reported, or internal, *post partum.*

We are not inclined to attribute the fatal event to the inhalation of chloroform alone, as it did not take place in the manner in which it usually occurs after a fatal dose of this deadly agent. There does not appear to have been the sudden arrest of respiration and the heart's action, which generally give the most peremptory warning of the imminent peril in which the patient is placed. Consciousness was not entirely suspended during the inhalation, and there was nothing alarming to the physician in the appearance of the patient at the time he left her. At this time the uterus was felt, firmly contracted, in the usual place.

The extreme difficulty of the labor, and the resistance of the uterus to the manipulations necessary to perform the operation of turning, the long-continued pressure of the womb by the child against the brim of the pelvis, excited proper caution of the physician lest rupture of the organ might take place. He clearly foresaw this danger, and did his best to avoid it. We do not think, therefore, that this accident occurred, as it probably would have been recognized, and the startling symptoms attendant upon it do not seem to have been present.

Moderate hæmorrhage is said to have taken place, but not enough, it is thought, to account for the death. This is a difficult point to settle. Its determination depends upon another, namely, the condition of the patient at the time, and her ability to bear even a small loss of blood. It is nothing unusual, as all accoucheurs know, for a moderate bleeding, after a protracted and exhausting labor, to cause most alarming syncope. The management of such cases calls for the exercise of the wisest judgment and the greatest caution on the part of the physician. The last straw breaks the camel's back. Here was a woman who been in strong labor for thirty-six hours before a professional attendant was summoned. It was a cross birth, and the uterus had in vain expended all its efforts to discharge its burden. Closely contracted upon the child, it was only with great difficulty that turning was accomplished. Unquestionably there was reason enough for much exhaustion. That this existed, appears from the direction of the physician to administer stimulants and nourishment. Full contraction of the womb followed delivery, it is said, but this is just the case in which we should look for the possibility of subsequent relaxation and consequent danger from internal hæmorrhage. The fatigued uterus would be most likely to lose the state of tension which followed immediately after the birth of the child, and allow that deadliest of all uterine hæmorrhages, because concealed from outward observation, to take place. We are strongly impressed with the conviction that this accident really occurred in the present instance. It certainly was most unfortunate that a professional call took away the attending physician so soon after the birth of the child. In all similar cases the danger of internal hæmorrhage should be present to the mind of the accoucheur, and calls for a prudent delay on his part and frequent examination of the condition of the womb before leaving the patient.

To sum up, we believe the death of the patient in the above case to have been caused by uterine hæmorrhage acting upon a system much exhausted by a prolonged and painful labor. We think it very probable there was extensive internal hæmorrhage; but whether this occurred or not, we are satisfied that even a moderate loss of blood, such as was actually observed, might be sufficient to account for the fatal result.

As to the use of anæsthetics in labor, about which our correspondent inquires, the subject has been pretty fully discussed in our pages already, and we would refer him to that discussion for our answer.* We are in the habit of using sulphuric ether ourselves in those cases in which we employ any anæsthetic. We always employ it, unless the patient positively refuses it, in instrumental labor, or labor requiring manual interference.]

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* See Nos. 1, 3 and 4, vol. lxix.

DR. GAILLARD'S PRIZE ESSAY ON OZONE; ITS RELATIONS TO HEALTH AND DISEASE.

[Continued from page 237.]

We proceed now to consider the relation which ozone bears to the existence of pulmonary diseases. Ozone in excess is prone to the production of pulmonary disorders, and to the induction of inflammation in the Schneiderian membrane. The ozonoscope, held before a half-closed door, has a deep hue given to it. Every one knows the effect of subjection to this kind of exposure; the ozonoscope elucidates the cause. It is a recognized fact, that eastern winds in America, and western winds in Europe, as coming over the sea, are frequently productive of pulmonic disorders, and almost always a source of aggravation, where such disorders already exist. Travellers in Africa tell us that pleurisies, pneumonias, &c., mark the coincident occurrence of certain winds. Schönbein mentions that ozone was manifested in marked quantity during an epidemic of influenza and a general prevalence of pulmonic disorders. There seemed to be a division of opinion among observers in Europe, as to the exact relation of ozone to pulmonary diseases, and accordingly extended observations were made for the elucidation of the subject. The testimony in this connection is voluminous, and although not without discrepancy, the conclusion now declared is established by facts. The tables, like those bearing upon other branches of the subject of ozone, are very interesting, but with the rest (on account of their great length and variety) must be omitted. We will at least give the most interesting testimony that is based upon them.

Spengler testifies, that in an epidemic of catarrhal fever and pulmonary disorders, the ozonometric degrees increased with the diseases, and diminished when they disappeared and as they disappeared. Schönbein confirms this testimony; so also does Scoutetten, and recently Clemens has stated that such are the results deducible from his tables. M. Bœckel, Jr., kept a faithful record of all the cases entering the large hospital at Strasburg; from these, he selected all suffering from pulmonary, catarrhal, bronchial, laryngeal and throat disease, carefully comparing the numbers admitted through a long period of time, with the fluctuations in the ozonometer. His conclusions are, that the number of pulmonary diseases (and the deaths from such diseases) is in a direct relation with the quantity of ozone, and in inverse relation with the degree of temperature. When there is much ozone, with a low temperature, such diseases and deaths are numerous; when there is little ozone, with high temperature, exactly the contrary. When there is much ozone, with high temperature, these diseases and deaths are yet marked in frequency. When there is little ozone, with low temperature, there is nothing specially peculiar, though at such times the deaths are often below the average. Scoutetten's tables lead him to conclude, that in the production of pulmonary disorders, ozone is the chief cause; that of temperature, with hygrometrical conditions, being secondary. It is only when the ozonometric record fluctuates much, that a sudden accession of ozone leads to pulmonary trouble; when it is fixed at 8, 9, 10, as on the high table lands of Mexico, an ozonic atmosphere does not produce such disasters. In these cases and among the Esquimaux and other races occupying such atmospheres, the air-passages learn, as it were, to tolerate this stimulus; a stimulus which, when unusual, produces its peculiar effects. This law we see constantly illustrated; the habitual use of any substance, locally or constitutionally poisonous even, produces in time a comparative and at times a total exemption from its ordinary influences. The painter is comfortable in an atmosphere loaded with the emanations from his pigments and their various and offensive menstrua; an atmosphere that brings nausea and sickness to the temporary visitor. The workmen in gas factories endure the constant inhalation of carburetted hydrogen, when an atmosphere containing even a trace of it, brings to most persons loathing and disgust. The opium and haschisch eaters, the tobacco and arsenic smokers, use, in time, with impunity, substances which bring prostration and death to those not gifted with their astounding perseverance and singularly manifested fortitude.

But to return to the insusceptibility of the air-passages to habitual irritants; it is well known that the "dry-grinders" of Sheffield, and other manufacturing towns, live to middle life, without apparent inconvenience, in an atmosphere that inevitably sacrifices them in the very strength of their manhood. Whether the explanation be a reasonable one or not, the fact is clearly demonstrable, that persons may, with impunity, live in an atmosphere saturated to 10 of the scale with ozone, and not only live, but enjoy the most perfect health; when if the atmosphere vary much in the amount of its ozone, a sudden accession of it is attended with catarrhal and pulmonary disorders.

Phthisis is not included in this connection; for its causes and relations are too multifarious and at the same time specific, to admit of its being classified with ordinary pulmonary disorders. Phthisis seems not to be influenced by the ozonic conditions of the atmosphere. In Florida, where the ozonometer marks zero, or the lowest degrees of the scale, it is scarcely known, and if brought there, in time is often arrested. On the contrary, in the Polar regions, where the register (from cold, ice and other meteorological and physical causes) is mostly at 10, phthisis has never been seen. Dr. I. I. Hayes (Surgeon to the U. S. Grinnell Arctic Expedition, and chief director of the Expedition which sailed during the year 1860 on the same philanthropic, but almost fruitless mission), thus writes on the subject of disease in those latitudes:—"We are astonished at the complete indifference of the Esquimaux to cold; not only do they seem indifferent to it, so far as concerns their physical comfort, but they are able to resist all of its depressing influences. They are a strong, robust and healthy race; scurvy is unknown among them; and *I have never known or heard of one instance of tubercular disease.* It is worthy of remark, that the climate is one of unusual healthfulness, and that scurvy and phthisis are unknown among the natives." Capt. Pope makes a very similar statement, in regard to the inhabitants of the table lands of New Mexico. It seems, then, that we have the negatively-proved fact, that ozone does not influence phthisis; that hygienic influences, life in the open air, with a disregard of temperature, are in this disease both therapeutic and prophylactic; that when not the result of city atmospheres and associations, of the dwelling together of masses in vitiated air and of hereditary transmission, this scourge of our race is unknown. It is not affected by ozone.

A deficiency in atmospheric ozone is frequently coincident with enteric and gastric disorders. At the tropics, the ozonometric register is low, and all are familiar with the malignant enteric disorders of those latitudes. M. Schönbein asserts that a diminution of atmospheric ozone coincided with the prevalence of gastric disorders at Berlin; that there was complete absence of ozone in this city, during the invasion of cholera. M. Billiard, of Corbigny, regards a diminution of ozone as the chief cause of cholera. M. Bœckel, of Strasburg, informs us that the invasion of cholera at that place coincided with the zero of the ozonometer. When cholera prevailed at Vienna, Slechner offered the same testimony in regard to the amount of ozone in the atmosphere. Schnepf, of Vienna, corroborates this statement, and his views were endorsed by M. Knolz, of that city. Dr. Smallwood, of Montreal, Canada East, writes, that "during the last visitation of cholera, there was certainly a diminution in the amount of ozone." M. Robert, at Nendorff, and M. Simonin, at Nancy, advocate the same views. M. Wolf, at Berne, after analyzing the mortuary lists of cholera at Aarau, in Switzerland, and comparing the results with his tables, states, "I conclude that cholera is favored by even the diminution of ozone." Bœckel declares that this diminution of atmospheric ozone is the predisposing cause of cholera.

It will certainly be observed, that all of this testimony is decided and unreserved; it is the testimony of the most reliable observers in the world; it distinctly and clearly states, that between ozone and cholera there is a constant and vital relation. Now it would not be supposed, that where individual observers gave such similar and identical testimony, there *could* be a different result, when the entire subject was referred to a committee for examination; yet such is the truth. A committee at Kœnigsburg could not discover that there was a direct relation between cholera and the amount of atmospheric ozone. How can this discrepancy be explained? Any one familiar with the subject of ozone can easily anticipate the reason.

The ozonometers used were not uniform, being constructed according to the judgment and chromatic acumen of each observer. It would be impossible, in any better way than this, to illustrate the great objection which all must confess to exist, against the ozonometers now in use. We see the best observers giving the most uniform, decided and satisfactory testimony on a certain subject, as long as each is governed by his own instrument; but as soon as others, equally competent, "exchange" their ozonoscopes and refer them to different ozonometers, all is confusion and obscurity. Here the hue of the ozonoscopes may be identical (as when two or more observers in the same city are similarly engaged); but when the ozonoscopes are referred to dissimilar ozonometers, the degrees registered are of course dissimilar, and this dissimilarity in the numbers registered may amount to two and sometimes three degrees at each observation taken. When many hundreds of such observations are taken, and the numbers added, it will be seen at a glance how totally different must be the result, with each individual; *all experimenting on the same atmosphere, with the same ozonoscopes, but with different ozonometers.*

To give a simple instance of this difficulty, and to make it strikingly apparent, we will suppose that in London cholera makes its appearance, and that, with the same ozonoscopes, three observers are daily taking registers of the atmosphere, *in the same locality.* The observations are made three times a day. The first observer, referring his ozonoscopes to an ozonometer constructed by himself, obtains at each observation, for ten days, the degree 3; his aggregate is 30, and his average 3. A second observer, with similar ozonoscope, but different ozonometer, finds, on comparing the first with the last, that he must register the number 4; he does so, three times a day, for ten days, and his average is 4. The third observer, under similar relations with his ozonoscope, but with a still different ozonometer, registers 5, and obtains this as his average. When these tables are published, we have the startling anomaly of three conscientious and scientific men declaring, respectively, that when cholera appeared, *there was a medium supply of ozone, less than a medium supply of ozone, and a great deficiency of ozone.* Professional readers, not examining into the very simple cause of this great discrepancy, at once come to the conclusion that either there is no relation whatever between cholera and ozone, or that, if there is, it has been examined by unreliable and dishonest observers.

This is not an imaginary instance, but is unfortunately founded on fact. It is beyond belief that, for many years, observers throughout the world have thus been within reach of the most valuable results, by the faithful use of efficient and similar ozonoscopes, but have had their hopes obscured and their deductions confused by so simple yet fatal a difficulty. Nothing, however, can better illustrate this truth, than the fact that observers, in their individual investigations, have almost universally testified that the existence of cholera *coincides with the low degrees and the zero of the ozonometer;* when a committee, in their labors, reach either *negative* or *opposite results*—involving the whole subject in uncertainty, obscurity and contradiction.

We believe that the whole of these difficulties can be easily and immediately removed by the general introduction of an efficient and uniform ozonometer. Under the present difficulties, however, the position is generally taken that the existence, duration and mortality of cholera is directly influenced by the amount of atmospheric ozone. M. Boeckel's opinion, that an absence of ozone is the predisposing cause of cholera, needs further examination before confirmation.

Many experiments have been made with a view of determining the effects of ozone upon rheumatism, but the results are not sufficiently definite to warrant any conclusion. Many of these experiments indicate that there is a relation, but the degree of this does not seem to be uniform.

The amount of ozone in the atmosphere on the mountains and in the valleys of Switzerland differs very much; it is much greater on the former. This point has been investigated in relation to bronchocele and cretinism. De Saussure states that these diseases do not exist among those living at the height of 1,000 metres above the level of the sea. In such atmospheres ozone is usually abundant, but it may be premature to say that bronchocele and cretinism prevail in an indirect ratio with ozone. It will be recollected that Capt. Pope concludes that there is a direct relation between the abundance of ozone and the malignity of cutaneous diseases. M. Wolf, in his last essay read before the Academy of Sciences, declares that a rapid diminution in the amount of atmospheric ozone is usually followed by a general augmentation of mortality.

[To be continued.]

LETTER FROM PHILADELPHIA.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—For reasons unknown to your quondam correspondent, the proposed meeting of the National Quarantine and Sanitary Convention has again been postponed, until next spring. Circulars had been issued calling for the election of delegates by the various medical associations to meet said "Quarantine, &c.," on Tuesday, Oct. 25th; immediately, the societies thus invoked, elected delegates more or less, to represent them in said convention, and now we are told that we shall have to postpone the usual round of feasting and sight-seeing until next spring. Perhaps the Goddess of Health may take care of us until that time. Let us hope.

Medically speaking, Philadelphia has resumed her labors, to end in the usual delivery of a host of "doctors" licensed to—practise *secundum artem.* The prospects, so far, will not impress any one with the idea of enormous classes, though new students generally continue to reach the city until "Christmas week," by which time it is supposed that they are deeply immersed in their studies.

Our societies have resumed their conversations, and are quite well attended; the subjects discussed being the usual diseases of this period, with a decided anxiety for information upon the "so-called spotted fever." Some day I shall endeavor to entertain your numerous readers with a full account of our medical gatherings and what we do there.

The volume of Transactions of the Medical Society of the State of Pennsylvania has just made its appearance, and is rather more creditable to that learned body than has been the case with many of their previous issues. In a hasty glance at it, I do not find so many of those errors or carelessly written prescriptions as may be found profusely scattered through at least two previous volumes. Such a volume is regarded outside of the profession as an exponent of the power of the medical fraternity producing it, and, consequently, too often these volumes of Transactions produce in the minds of outsiders a rather unfavorable idea, which is not at all calculated to improve their belief in our skill or knowledge. This is a matter of vital importance, and most urgently needs correction.

Dr. Alfred Stillé, the new Professor of Practice in the old University, has made his *début*, and appears to have produced a most favorable impression upon his class, which I trust may continue.

Dr. Ellerslie Wallace, Professor of Obstetrics in the Jefferson, meets with great success, and has fully satisfied his friends that he is a worthy successor of the venerable and gifted Meigs.

Health abounds in our city, and I cannot say that any epidemic prevails, with the exception of that terrible fever which attacks so many about the fall, and is shown by the utterance of windy speeches in the "spread eagle" style, but which it is hoped will disappear after the "*ides* of November." N.

Philadelphia, October 14*th*, 1864.

Bibliographical Notices.

A Vindication of the Present State of Aural Surgery. By a Member of the New Sydenham Society. London: John Churchill & Sons.

In the number of the Journal for July 14th, 1864, a notice of certain works upon Diseases of the Ear was closed with perhaps too entire a commendation of Dr. Wm. Kramer's late work, entitled "The Aural Surgery of the Present Day," recently presented to the profession by the New Sydenham Society, in the form of a translation. We are free to confess that at the time the mere allusion to this volume was made, we had only glanced at its contents. A more careful examination, since, and especially a perusal of a pamphlet just published by Mr. Toynbee, of London, has induced us very materially to modify the unqualified approbation at first awarded to Dr. Kramer's book. We also plead guilty to leaning rather too absolutely upon the endorsement of the volume by the Sydenham Society, as afforded by its adoption as one of their series of publications. Mr. Toynbee's critique is perhaps somewhat severe, but, we must allow, it seems to us just in nearly all of its positions; and, as he is "a member of the New Sydenham Society," that Association would apparently do well to consult him in regard to any future publications upon Aural Surgery they may think of putting before the profession.

We can still honestly say that Dr. Kramer's book has very much in it of "value and interest," but in regard to the points where the author is taken to task by his critic, it seems to us the latter has the advantage. Mr. Toynbee has entitled his pamphlet "A Vindication of the Present State of Aural Surgery." The writer's name does not appear upon the title-page, but the production has been personally acknowledged by him. The condemnation of Dr. Kramer's book is, as we have intimated, very sharp and wholesale—as the following extract from the "Introduction" will suffice to show:—"There cannot, however, be the least doubt in the minds of those who are able to give an opinion of the book, that it is wholly unworthy of the subject it treats, and that not only does its author lay himself open to censure by pretending that it represents the present state of Aural Surgery, but that the Council of the New Sydenham Society, by undertaking its publication, have exhibited either ignorance or carelessness. Indeed, in place of being, as its title would indicate, a comprehensive and intelligent survey of the present state of Aural Pathology and Surgery, it is in reality little more than an advertisement of the author's peculiar system of treating diseases of the ear, by means of his four catheters and catgut bougies. Anatomy, pathology and scientific surgery are sneered at, every modern plan for simplifying the study of ear diseases, and for enabling them to be diagnosticated and treated by the members of the profession, are [is] wholly ignored, and the author's system of using four catheters and catgut bougies is made to be the *all-in-all* of aural diagnostics and therapeutics. Indeed, so great an injustice has been done to the subject of Aural Surgery in the issue of this volume by the New Sydenham Society, that its perusal must call up a blush in all having any knowledge of, or interest in, its study; and doubtless the members of the New Sydenham Society have good reason to be indignant that such a production has been forced upon them."

In his criticisms, Mr. Toynbee specially alludes to the following points:—1st. Dr. Kramer's assertion of "the uselessness of anatomy and morbid anatomy"—a declaration likely to touch the critic nearly, since a large part of his reputation rests upon his researches and discoveries made through the application of those branches to the study of diseases of the ear. 2dly. The "physiology" of Dr. Kramer is found to be at fault, in that he does not admit the conduction of sound by means of the *ossicula auditûs*, and reasons therefrom that disease of the ossicula cannot produce deafness. The analogy between the adaptive power of the iris of the eye and that "demonstrated" to belong to the chain of small bones with regard to different degrees of sound, is overlooked by Dr. Kramer. The fact that the Eustachian tube is *normally closed,* and that its faucial extremity is only opened during deglutition, is also not noticed. This latter fact "was demonstrated by Toynbee." 3dly. Kramer's ignoring reflected light in examinations of the outer ear is alluded to, and also his neglect to notice "the inexpensive and simple silver speculum now in general use," while the "long-bladed, unwieldy and costly steel implements are alone recommended." The use of the "catheters" and of the "catgut bougies" is next animadverted upon, and also Dr. Kramer's advocacy of treating diseases of the ear independently of "any constitutional affections." In no portion of Mr. Toynbee's strictures can we more heartily join him than in those relative to the two topics last mentioned. The constant and persistent probing and catheterism of the Eustachian tube, as was remarked in a former article, can hardly be too pointedly condemned; and the evident connection of very many aural affections with morbid constitutional states, cannot but impress the careful observer. 4thly. The "Special Surgery of the Ear" is considered, and Mr. Toynbee acknowledges himself startled by the announcement, from Dr. Kramer, "that the meatus is lined by *mucous membrane.*" Criticism upon the author's views as to inflammation of the membrana tympani follows, and also in respect to the artificial membrana tympani. Then come remarks upon "Diseases of the Middle Ear," in treating which by Dr. Kramer's "bougies," &c., the pain caused is especially mentioned, and the inefficacy of the measures advised directly asserted :—"The Germans must, indeed, be a patient, long-suffering race, if they calmly bear Dr. Kramer's operations, especially so as those operations are, without any doubt, utterly useless. Why pass catgut bougies into 'the healthy Eustachian tube?' Not to diagnosticate its state; for this purpose we have seen that no operation is required; not to treat the Eustachian tube, for it is '*healthy*;' not to treat the tympanic cavity, for 'it is useless to push the catgut' there. Then for what human, or rather inhuman, purpose is catgut forced into 'different people's' tympanic cavities, producing extremely acute pain, and running a risk of dislocating the stapes and destroying life? We suppose Dr. Kramer would reply, 'in order to help me to diagnosticate my four kinds of exudation in the tympanic cavity'—Dr. Kramer's pathological discovery, and which we now proceed to consider."—(Toynbee, *op. cit.*) Space, we fear, could hardly be allowed us to follow the critic, in detail, in his comments upon this portion of Dr. Kramer's work. Suffice it to say, that the most prominent remarks relate to the employment of the "catgut bougies," injections into the Eustachian tube, &c. The writer's summary conclusion is, "that nothing more unworthy of the subject can possibly have been penned." He then contrasts Dr. Kramer's views and teachings with what has recently been written, by himself and others, and verified by "hundreds of dissections," in the following *résumé*:—"These morbid conditions of the mucous membrane may be summed up briefly as follows :—

"1. Simple congestion.

"2. Hypertrophy: with or without an accumulation of mucus.

"3. Rigidity.

"4. Ossification of the fibres surrounding the base of the stapes, causing anchylosis of the stapes.

"5. Ulceration.

"And these morbid states are capable of easy diagnosis, as will be perceived by reference to recent works on the subject."

Exception is next taken to Dr. Kramer's ideas in reference to "Noises in the Ears, without Hardness of Hearing"—that author considering that the seat of such noises "*can* only be in the chorda tympani"! The treatment advised is the injection of "a few drops of a solution of nitrate of strychnine (gr. 1. to ℥i. of water)! This is to be 'injected into the cavity of the tympanum through a No. 1 catheter; this may either be repeated daily, or once or twice a week, according to the activity of absorption possessed by the membrane of the tympanic cavity.'

"Truly, the Sydenham Society has been the means of introducing novel views of pathology and therapeutics to English medical men!" (Toynbee.)

Diseases of the Internal Ear and Deaf-Mutism are next considered. Kramer's statement that the proportion of cases of Nervous Deafness is "*only four in a thousand*," is considered by Mr. Toynbee a notable mistake; as is also the declaration that in cases of "nervous deafness there is *complete loss of hearing*." This latter Mr. T. believes to be "fortunately very rare."

In respect to "Deaf-Mutism," Dr. Kramer states that "in many, perhaps even in the majority of cases, *no* structural changes are discovered either in the labyrinth or in the centric extremity of the auditory nerves." Mr. Toynbee cites figures to prove the contrary—in "36 dissections by different anatomists, we shall find that in every case, with the exception of one of Mr. Toynbee's five, well-marked lesions *were* found."

In "Conclusion," the critic presents a condensed statement of what he believes to be the present condition of Aural Surgery, "as compared with its state a few years back," and this we quote entire.

"And, first, regarding the exploration of the *external meatus*. Instead of, as formerly, simply looking into the meatus by allowing day or candle light to fall into it, or by merely exploring it with a probe, we at present use a reflector or a lamp with a tubular speculum, and thus light up every part of the meatus, and if it is clear from obstruction we gain a view of the *membrana tympani*; accumulations of cerumen or epidermis, tumors of various kinds, hypertrophied conditions of the dermis, and the several sources of discharge can be seen, and the presence or absence of foreign bodies can be decided upon, there being no longer a fear of dangerous operations for the removal of the latter, when in reality they are not present. In place of syringing the ears in every case of deafness, and thereby often doing serious mischief, at *present* a due exploration at once decides if syringing be necessary, and when necessary, the removal of the accumulation having been effected, we are led to seek for the affection of which this accumulation was symptomatic. Instead of dropping in oils or tinctures in all cases of obstruction, at *present* we are aware of the frequent presence of bony or sebaceous tumors, and we treat them accordingly. Instead of using the terms *otorrhœa* and *otitis* in cases of the manifold discharges and inflammations to which the ear is subject, we *at present* specify the source of the discharge, or the nature and seat of the inflammation. *At present* we know that polypi are, as a rule, symptomatic of some deeper affection of the organ, and we do not seek to cure them by mere extraction, but by striving also to remove the cause. In place of talking of inflammation of the *membrana tympani*, we now specify whether it is the dermoid, fibrous or mucous layer that is affected. We no longer feel that deafness arising from an aperture in the membrana tympani is incurable ; *at present*, being unacquainted with the real structure of the *membrana tympani*, and how it is kept in a resilient state, we use artifical substitutes for this organ. *At present* we also know the various morbid conditions to which the *membrana tympani* is subject, as relaxation, tension, hypertrophy of its layers, calcareous degeneration, &c. Instead of being in darkness regarding the diseases of the tympanic cavity, we *at present* know the various diseased conditions to which its mucous membrane is subject, as hypertrophy, rigidity, the formation of false membrane, and the various kinds of accumulation, as mucus, pus, scrofulous matter, and blood, which are apt to take place there. We know also the intimate relations existing between this mucous membrane and the dura mater, and we know that disease of the mucous membrane of the tympanum is apt to extend to the cerebrum, and that of the mastoid cells to the cerebellum. *At present* we know the double function of the chain of bones, also the nature of their diseases, especially of that interesting disease ankylosis of the stapes, of which so many dissections have been of late years placed on record. Of the *Eustachian tube*, instead of believing that it ought to be always open, and endeavoring to keep it open, *at present* we know that it ought to be open *only* during the momentary act of swallowing, that its patescence is one of the most unendurable of diseases ; we also can diagnose the state of the Eustachian tube and tympanic cavity by means of the otoscope and a single tube, without the aid of the Eustachian catheter ; we also know the various causes of obstruction of the Eustachian tube, and when the catheter ought and when it ought not to be used ; we know also that when the faucial orifice of the tube is obstructed, the prime duty of the surgeon is to remove all impediments to the opening of the tube by its muscles. In place of looking upon all cases of noises in the ear as instances of nervous deafness, we *at present* know that noises in the ears are produced by affections of various structures which induce a deranged or defective action of the nervous apparatus ; further, we *at present* know that debility of the nervous apparatus of the ears may depend upon either physical weakness or over-mental strain. We also know that suppuration in the labyrinth is apt to originate disease in the medulla oblongata. And instead of speaking of cases of 'caries of the petrous bone extending to the brain,' we *at present* are aware that the affections of certain parts of the organ of hearing produce disease in certain and distinct portions of the brain, and that the cause of disease extending from the ear to the brain, as a general rule, is the detention of matter in one of the cavities of the ear. In short, it may be said that we are now so far acquainted with the structure and pathology of the ear that, in cases of disease and deafness, we are *at present* enabled to particularize the tissue affected and the nature of its affection, and also to point out the proper treatment. Doubtless the subject of the diseases of the ear is still beset with many difficulties ; indeed, it is one requiring so great and so prolonged attention that it is probable, at least for some years to come, surgeons will be required to devote themselves solely to Aural Surgery; but we contend that that branch of surgery has been raised to the dignity of a scientific study. If further proof of this statement were wanted, it may be found in the fact that at least three London hospitals now have aural surgeons attached to them, and regular courses of lectures on the diseases of the ear are delivered in some of our medical schools.

"We have now completed the task rendered requisite by the publication of this volume on the present state of Aural Surgery, by the New Sydenham Society. We think we have shown that the work does not give the faintest idea of the present state of Aural Surgery, but that, on the contrary, it is wholly unworthy of its subject, and we have given grounds for believing that the subject *is* worthy of the present state of medical science.

"And, if asked why we consider the task of thus vindicating the present state of Aural Surgery incumbent upon us, we reply, because we consider it the duty of this country to uphold, as far as possible, the scientific character of the study of Ear Diseases; for, when we turn to Europe and America, we find that the scientific workers in this branch of professional study (and they are now numerous and able) unceasingly point to the researches conducted in this country on the anatomy, physiology, pathology, and therapeutics of the ear, as forming no insignificant share in the foundation of scientific Aural Medicine."

On Rheumatism, Rheumatic Gout and Sciatica, their Pathology, Symptoms and Treatment. By Henry William Fuller, M.D., Cantab.; Fellow of the Royal College of Physicians, London; Physician to St. George's Hospital, &c. &c. From the last London Edition. Philadelphia: Lindsay and Blakiston. 1864. 8vo. Pp. 424.

This is the third edition of Dr. Fuller's scientific treatise on the different forms of rheumatism and the allied diseases, and comes to us enriched by the mature experience of the author since the work first appeared. His views are, in the main, those which obtain the most general support among the leading minds of the medical profession at the present time, and the author reaffirms with great confidence the efficacy of the alkaline method of treatment proposed by him, and which has come into such general favor. In the chapter on Sciatica and Neuralgic Rheumatism, he gives the result of his experience with regard to the effect of subcutaneous injections of anodynes in these complaints, with some cases in illustration. We cannot too strongly recommend this work as embodying the most philosophical views both in theory and practice of the distressing complaints of which it treats.

A Treatise on the Chronic Inflammation and Displacement of the Unimpregnated Uterus. By William H. Byford, A.M., M.D., Professor of Obstetrics, &c., Chicago Medical College, Medical Department Lind University. Philadelphia: Lindsay and Blakiston. 1864. 8vo. Pp. 215.

This handsomely printed volume is mainly a treatise on inflammation of the cervix uteri and its complications and consequences, and is intended to meet a want very generally felt by the younger members of the medical profession. It is a sensible, practical work, and cannot fail to be read with interest and profit. It is supplied with a copious index.

The Physician's Dose and Symptom Book, containing the Doses and Uses of all the principal articles of the Materia Medica and Officinal Preparations, &c. &c. By JOSEPH WYTHES, A.M., M.D., Author of the "Microscopist," "Curiosities of the Microscope," &c. &c. Fourth Edition. Philadelphia: Lindsay and Blakiston. 1864.

THIS little manual contains also rules for proportioning the doses of medicine, a table of poisons and their antidotes, dietetic preparations, a table of symptomatology, &c. It is small enough to be carried in the pocket without inconvenience, and its use would save practitioners from the tendency to routine prescription, from which few escape without some such mentor to recur to occasionally. We think the author has not given as much attention as he might have done to new remedies, or the new application of old ones. Several that we have looked for we have found wanting or imperfectly noticed. But in the main it will be found to be a very useful little book. It is supplied with a full index.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, OCTOBER 27, 1864.

WHAT SHALL WE EAT?—No question, perhaps, could be framed which so readily claims the attention of every human being as this. The laborer going anxiously forth to his daily toil does not always succeed in finding a satisfactory answer for the hungry mouths which ask it, while to the physiologist and political economist it becomes one of increasing importance each year, as the world grows fuller and its soil less fertile. In other countries, older than our own, oppression and overcrowding have worked out many an interesting dietary experiment, and have tested the capabilities of human endurance both as to the minimum quantity and the quality of food. Fortunately for us, this vast continent has preserved its long-accumulating, virgin soil to our day, and has filled our mouths with plenty, and overflowed for the benefit of the starving peoples of the other hemisphere. The question "what shall *we* eat?" has been generously answered by mother earth hitherto by a "what you will." There are signs, however, visible to the reflecting, which mark the approach of the time with us also when a novel importance shall attach itself to this question, when in fact it shall no longer be one of choice only as heretofore, but of the possibility of getting. We have been wantoning with the bounty of nature. Heedless of the very lessons forced upon us by our superabundance, we have not stopped to ask if there was no warning for us in the ready market our cereals have found in other countries, in the anxiety which a small harvest here has produced in the unstable thrones of Europe, and the immense throng of immigration fleeing from starvation to our shores. Our fathers began by burning and cutting off all the forests, and destroying all the woodland growth of centuries Thus the Atlantic States were built up by the wholesale destruction of the products of their surface. These failing, the immense and fertile plains of the West were next attacked, and as one State has grown less and less productive under the fatal system of taking all the taxed soil will yield and giving nothing back, cultivation has been pushed farther on towards the Pacific. Thus it happens that portions of New York and Ohio, which were once as fruitful as Eden, have become as barren as New England, and the same increasing unproductiveness of a starved soil is ever following the farmer in his destructive course westward.

Bread, indeed, is still abundant and cheap ; but we cannot live upon bread alone. Animal food is as necessary to man as the products of vegetation, and the soil which is unable to produce a sufficiency of both for its population is in a critical condition. This fatal confidence in nature's power to create life and plenty from nothing has at last begun to make itself felt in this way, and the question, where shall we get our meat, is becoming almost as serious a matter in Young America as in the exhausted countries of the old world. The price of meat has risen so greatly of late that the poor no longer can obtain a necessary supply, nor is this increase by any means due to the relative enhancement in the cost of all other articles of consumption. In the country, good beef cannot be bought at any price, and mutton is scarce and of poor quality. As to milk, nearly all of that purchased at such high rates by the laboring classes is largely adulterated, and the milkmen find it difficult to supply their customers. Even the sick cannot always obtain the necessary quantity of proper animal food, and we have several times been told by patients living at a distance from large cities that it would be impossible to carry out the directions as far as diet was concerned. Among farmers a dinner of fresh meat is becoming more and more a rarity, and yet no people require a greater amount of animal food than our own. New England now calls largely upon the Western States for its supply, and as the richness of those regions is gradually sapped and their own population increases, this source cannot prove sufficient for our need.

If, then, our present stock of domestic cattle fails to furnish the proper quantity of animal food, is it possible to supply such deficiency by the introduction of other species to our table? The numerous acclimatization societies, which have been lately organized in Europe, are testing the economy of such measures, and the artificial culture of fish, which is carried on in the same countries with so much success, is an effort in the same direction. It is evident, however, that if our soil is at the present moment taxed beyond its long endurance to support its present growth of fruit and grains, and of sheep, swine and beeves, there would be no economy in the domestication of other large herbivorous animals, as the eland, for instance, or other South African antelopes, unless an equal amount of nutriment for man were thus produced with a less drain upon the soil.

There is, however, one source of flesh which deserves the attention of all interested in this matter among us, and which has for several years received the consideration of men of science in Europe. The horse is as strictly an herbivorous animal as the ox, and according to all who have tasted it his flesh is nearly as palatable as that of the latter.

Indeed, its most nearly allied relatives in nature, the wild asses of Asia and the quagga of Africa, are hunted on account of their flesh, which is thought to be one of the greatest dainties. Many tons of good animal food are allowed to go to waste during the year in every community on account of our prejudice or ignorance regarding the fitness of this animal for food, which might otherwise help supply this deficiency we deplore. Every horse, as soon as disabled by age or accident from service in his present capacity, could be easily fatted and slaughtered, and thus add greatly to his present value and the productiveness of the land. For ourselves we would as readily eat the flesh of the horse as of the ox, sheep, deer, or other vegetable feeder, and far rather than that of the filthy and parasite-breeding hog. We trust it will not be long before a slaughter-house for horses is established in this country, and that its flesh will become a regular article of diet as in Vienna, Berlin, Lyons and Zurich.

SCIENCE AND SCRIPTURE.—The following correspondence is copied from the London *Athenæum* of Saturday, Sept. 17th, 1864 :—

Sion House, Lower Clapton, N. E., Sept. 5, 1864.

SIR,—I beg to call your attention to the accompanying Declaration, now in course of signature among scientific men, which it is proposed to issue, when a sufficient number of names has been obtained. I trust that you will approve of the spirit of the document, and the terms in which it is expressed, and solicit the favor of your signature to be appended to the memorial.—I am, Sir, your obedient Servant,

CAPEL H. BERGER.

Sir John Herschel, Bart., K.H., F.R.S., &c.

THE DECLARATION.

We, the undersigned, Students of the Natural Sciences, desire to express our sincere regret that researches into scientific truth are perverted by some in our own times into occasion for casting doubt upon the truth and authenticity of the Holy Scriptures. We conceive that it is impossible for the Word of God, as written in the book of nature, and God's Word written in Holy Scripture, to contradict one another, however much they may appear to differ. We are not forgetful that physical science is not complete, but is only in a condition of progress, and that at present our finite reason enables us only to see as through a glass darkly, and we confidently believe that a time will come when the two records will be seen to agree in every particular. We cannot but deplore that natural science should be looked upon with suspicion by many who do not make a study of it, merely on account of the unadvised manner in which some are placing it in opposition to Holy Writ. We believe that it is the duty of every scientific student to investigate nature simply for the purpose of elucidating truth, and that if he finds that some of his results appear to be in contradiction to the Written Word, or rather to his own *interpretations* of it, which may be erroneous, he should not presumptuously affirm that his own conclusions must be right, and the statements of Scripture wrong; rather leave the two side by side till it shall please God to allow us to see the manner in which they may be reconciled; and, instead of insisting upon the seeming differences between Science and the Scriptures, it would be as well to rest in faith upon the points in which they agree.

Upwards of 210 names have already been received, including 30 F.R.S.'s, 40 M.D.'s, &c. Among them are the following:—Thomas Anderson, M.D., J. H. Balfour, M.D., Thomas Bell, J. S. Bowerbank, LL.D., Sir David Brewster, James Glaisher, Thomas Rymer Jones, James P. Joule, LL.D., Robert Main, Lieut.-Col. Sir Henry C. Rawlinson, Thomas Richardson, Ph.D., Henry D. Rogers, LL.D., Adam Sedgwick, M.D., Alfred Smee, and John Stenhouse, LL.D., who has kindly offered to receive signatures at his laboratory, Rodney street, Pentonville, London.

Collingwood, Sept. 6, 1864.

Sir,—I received some time ago a declaration for signature, identical in its wording, or at all events in its obvious purport, with that you have sent me. I considered that the better course was to put it aside without notice. But since it is pressed upon me, and to prevent the repetition of a similar appeal, it becomes necessary for me distinctly to decline signing it; and to declare that I consider the act of calling on me, publicly to avow or disavow, to approve or disapprove, in writing, any religious doctrine or statement, however carefully or cautiously drawn up (in other words, to append my name to a religious manifesto), to be an infringement of that social forbearance which guards the freedom of religious opinion in this country with especial sanctity.

At the same time, I protest against my refusal to sign your "Declaration" being construed into a profession of Atheism or Infidelity. My sentiments on the mutual relations of Scripture and Science have long been before the world, and I see no reason to alter or to add to them. But I consider this movement simply mischievous, having a direct tendency (by putting forward a new Shibboleth, a new verbal test of religious partizanship) to add a fresh element of discord to the already too discordant relations of the Christian world.

I do not deny that care and caution *are* apparent on the face of the document I am called on to subscribe. But no nicety of wording, no artifice of human language, will suffice to discriminate the hundredth part of the shades of meaning in which the most world-wide differences of thought on such subjects may be involved; or prevent the most gently worded and apparently justifiable expressions of regret, so embodied, from grating on the feelings of thousands of estimable and well-intentioned men, with all the harshness of controversial hostility.—I am, Sir, your obedient Servant, J. F. W. Herschel.

Capel H. Berger, Esq.

Sir John Bowring has also sent us a copy of the same circular, addressed to him by Professor Stenhouse, together with his reply, declining to subscribe it. The second document runs as follows:—

Claremont, Exeter, Aug. 27, 1864.

Dear Sir,—In the general spirit of the document to which my adhesion is asked I cordially concur. That all truths must ultimately harmonize—that one truth cannot be inconsistent with another truth, are propositions—axioms, rather—which cannot be contested; to proclaim an approval of them is as much a work of supererogation as it would be to publish an avowal of agreement with the demonstration of a mathematical problem. But it appears to me the period has arrived when we should endeavor to emancipate ourselves from the tyranny of all dogmatizing creeds, all enforced confessions, all foregone conclusions, all compromising declarations; perseveringly carrying out to their necessary consequences our own investigations and convictions, and encouraging others to exercise the same right, and discharge the same duty. I do not know how the cause of truth and the interests of religion can be better served than by allowing the utmost latitude to inquiry. It is not possible—nor, if possible, desirable—to prevent comparisons between the historical revelations of the past and the scientific discoveries of the present time. The Bible must be brought into the broad daylight—out of the darkness to which ancient authority condemned it; it must be tested by inquiring knowledge, and taken from the custody of contented ignorance; it must be cleared of its cobwebs, and purged from its corruptions. Nothing less ought reasonably to satisfy those who believe; nothing more can fairly be demanded by those who doubt; but thus much may be asked in the interest of all. There is no "presumption" in giving to the world conclusions soberly, seriously, and reverently formed, be those conclusions what they may. The best resting-place for "faith," or hope, or comfort, will, after all, be found in allowing to the intellectual faculties with which God has blessed us, their widest influence and action over the whole field of thought. By "proving all things" we shall best be able to "hold fast that which is good," and we may be fully assured that the Great Verities which have stood the storms and shocks of agitated centuries, will remain unshaken through coming ages.—I am, dear Sir, your obedient, humble servant,

Prof. Stenhouse, F.R.S., &c., London. John Bowring.

Boston Dispensary—Statistics for the Year ending Oct. 1st, 1864.

NEW PATIENTS.

Central Office.		*Districts.*	
Medical—Men, - - -	1,092	Men, - - - - -	1,630
Women, - - -	4,095	Women, - - - - -	3,743
Children, - -	3,821	Children, - - - -	4,328
Total, - - -	9,008	Total, - - - - -	9,701
Surgical—Men, - - -	875	*Central Office and Districts.*	
Women, - - -	1,125	Men, - - - - -	3,597
Children, - -	1,461	Women, - - - - -	8,963
		Children, - - - -	9,611
Total, - - -	3,461		
Medical and Surgical—Total,	12,469	Total, - - - -	22,171

OLD AND NEW PATIENTS.

Central Office—Medical, - - - - - - - - -		18,064
" " Surgical, - - - - - - - - -		5,114
Total, - - - - - - - - - - -		23,178
Average daily attendance, - - - - - -	78½	
Districts—Births, - - - - - - - - -	126	
" Deaths, - - - - - - - - - -	237	

NEW PATIENTS.

District.	*Physician.*		*District.*	*Physician.*	
1.	C. C. Street, E. W. Aiken,	1,868	6.	John Hart,	790
2.	John W. Hinckley,	241	7.	Thomas H. Hoskins,	1,063
3.	D. K. Warren, A. J. Fenn,	1,673	8.	William E. Rice,	1,181
4.	H. L. Shaw, W. B. Mackie,	1,376			
5.	Charles K. Wheeler,	1,509		Total,	9,701

Total number of prescriptions, - - - - - - 40,183

Central Office—Attending Physicians and Surgeons.

Physicians.
J. B. Upham.
A. D. Sinclair.
S. L. Sprague.
H. K. Oliver, Jr.
S. W. Bowles.
J. C. White.
S. H. Carney.
Hall Curtis.

Surgeons.
C. D. Homans.
D. W. Cheever.
Algernon Coolidge.
John Green.
Apothecary—A. K. Carruthers.
Assistant—Horace S. Bartlett.

Consulting Physicians—Jacob Bigelow, P. M. Crane.
" *Surgeons*—S. D. Townsend, J. Mason Warren.

HOWARD F. DAMON, M.D., *Superintendent.*

LECTURES AT MASS. MEDICAL COLLEGE.—The annual course of winter lectures in the Medical Department of Harvard University will be opened on Wednesday, Nov. 2d, by an introductory lecture by Prof. Clarke, at the Medical College.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, OCTOBER 22d, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	35	39	74
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.4	34.9	70.3
Average corrected to increased population - - - - -	00	00	76.98
Death of persons above 90 - - - - - - - - -	0	0	0

BOOKS AND PAMPHLETS RECEIVED.—Therapeutics and Materia Medica. A Systematic Treatise on the Action and Uses of Medicinal Agents, including their Description and History. By Alfred Stillé, M.D., Professor of the Theory and Practice of Medicine in the University of Pennsylvania, &c. Philadelphia: Blanchard & Lea.—Outlines of Surgical Diagnosis. By George H. B. Macleod, M.D., F.R.C.S.E., &c. New York: Bailliere Brothers.—Gun-shot Wounds and other Injuries of Nerves. By S. Weir Mitchell, M.D., George R. Morehouse, M.D., and William W. Keen, M.D., Acting Assistant Surgeons U.S.A., in charge of U.S.A. Wards for Diseases of the Nervous System, Turner's Lane Hospital, Philadelphia. Philadelphia: J. B. Lippincott & Co.—A new Method for treating Fractures of the Femur in Children. By G. D. Beebe, M.D., late Surgeon-in-Chief of the 14th Army Corps, U.S.A.—Transactions of the Medical Society of the State of Pennsylvania, at its Fifteenth Annual Session, held in Philadelphia, June, 1864.—Circular of the Medical Institution of Yale College, Session of 1864–65.—Sixteenth Annual Catalogue and Report of the New England Female Medical College.

MARRIED,—In Haverhill, Oct. 20th, Dr. C. S. Kittredge, of New York, to Miss A. M. Chase, of Haverhill.

DEATHS IN BOSTON for the week ending Saturday noon, Oct. 22d, 74. Males, 35—Females, 39.—Inflammation of the bowels, 1—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 2—burns, 1—cancer, 2—cholera infantum, 1—consumption, 17—convulsions, 1—croup, 2—diarrhœa, 4—diphtheria, 1—dropsy, 1—dropsy of the brain, 2—drowned, 1—dysentery, 1—epilepsy, 1—typhus fever, 1—disease of the heart, 2—homicide, 1—infantile disease, 1—intemperance, 2—congestion of the lungs, 1—inflammation of the lungs, 5—marasmus, 4—old age, 2—paralysis, 4—pleurisy, 1—puerperal disease, 1—disease of the skin, 1—smallpox, 2—suicide, 1—tumor, 1—unknown, 3—whooping cough, 1.

Under 5 years of age, 27—between 5 and 20 years, 5—between 20 and 40 years, 24—between 40 and 60 years, 8—above 60 years, 10. Born in the United States, 47—Ireland, 19—other places, 8.

THE

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TWO CASES OF ENUCLEATION OF THE EYE, FOR THE PREVENTION OF SYMPATHETIC OPHTHALMIA.

By Hasket Derby, M.D., Boston.

[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

J. F. B., aged 10, was brought to me Oct. 13th, 1863. He had been fishing that morning in company with another boy, who, in swinging his line preparatory to a cast, had transfixed the eye of his companion with the hook. Various efforts made to withdraw it served only to fix it more deeply in the eye. I saw the patient some four hours after the occurrence of the accident. The hook had entered the right eye near the extreme lower edge of the cornea, had passed upwards, transfixing the iris and the lens, and buried itself to within about four lines of the end of the shank. The crystalline was already opaque, and a portion of it had become detached and fallen forward into the anterior chamber. The patient was suffering extreme pain.

Considering the efforts that had already been made to extract the hook, as well as the point at which it had entered the eye and the severe injury this organ had already suffered, it was felt that so extensive an operation as must of necessity be undertaken for the removal of the hook offered a comparatively slight chance of restoring vision, and would in all probability be followed by that tedious inflammation of the iris and ciliary region so peculiarly liable to be followed by sympathetic ophthalmia of the sound eye. The patient was therefore etherized and enucleation performed, after the method of Bonnet, the conjunctiva being divided close to the cornea and the six muscles and optic nerve at their very insertions into the ball, thus leaving as much as possible in the orbital cavity, and affording a better cushion for an artificial eye. In twelve days one was introduced, and has been worn with advantage up to the present time.

H. R., aged 19, a native of Smyrna, called on me Sept. 24th of the present year. At the age of 4 he had received a severe blow on the left eye from an ivory-headed cane, a projecting portion of the carving of which probably penetrated the eye, though whether any piece had been broken off and remained in the eye he is unable to say. A severe inflammation ensued, completely destroying vision on this side. Ever since, the eye has been subject to inflammatory attacks, lasting about fourteen days at a time, and occurring some four times a year.

On examination, the left eye was found but little altered, either as to tension or size. Much congestion of the deep ciliary vessels existed, the cornea was entirely opaque within about half a line of its upper edge, its area being occupied by an uneven leucoma bearing evidences of frequent ulceration. No perception of light existed. The right seemed in every respect perfectly normal, both as to vision and the ophthalmoscopic appearances. Patient had observed, however, of late, a growing inability to use this eye for any length of time, especially in the evening, without considerable uneasiness, watering and injection. This is more particularly the case after an attack of inflammation in the other.

No doubt was felt as to propriety of surgical interference in the present case. The left eye was irretrievably lost. The frequent attacks of inflammation in it, occurring with such frequency and extending over so many years, required to be put an end to, both on account of the annoyance they caused, and the danger the sound eye ran of being ultimately affected, if indeed the symptoms of irritability it was already exhibiting were not the forerunners of a sympathetic ophthalmia.

Two methods of operating presented themselves—the one being the reduction in size of the eyeball so as to admit of the wearing of an artificial eye over the stump thus formed; the other, the removal of the whole ball by enucleation. The former plan could be carried out either by removing the anterior half of the eyeball and allowing the remainder to cicatrize, or by running a silken thread through the ball to excite a purulent choroiditis and consequent atrophy of the bulb. Either of these methods would leave a better stump on which to place an artificial eye than enucleation; were open, however, as it seemed, to grave objections—partial abscission of the bulb not unfrequently being followed by annoying hæmorrhage, and entailing a tedious convalescence; while, on the other hand, if the eye at present under consideration contained a foreign body, or bony deposits had formed in its interior, its reduction in size would result in leaving an irritable stump, which would itself have to be removed at a future day, until which time the danger of a sympathetic ophthalmia would not be passed.

Enucleation was therefore decided on, and performed Sept. 27th. Not more than two drachms of blood was lost, and the patient left his bed within forty-eight hours. Oct. 7th, he commenced wearing an artificial eye, and is now attending to his business as usual.

On examination of the eye thus removed, the globe was found to be of normal dimensions, the sclerotic being in the posterior half so thin in many places as distinctly to reveal the hue of the choroidal pigment. A section of the globe being made, the cornea was found to be much thickened, the lens shrunken and chalky. The retina was wholly detached from the choroid, hanging away from its attachments at the ora serrata on all sides, and extending in the shape of a funnel to the optic nerve, around the edges of which it was closely applied. Overlying the choroid and easily separable from it, was a bony shell or scale, one inch in length and seven lines in width, accurately moulded on the eye. At its thickest point or centre its thickness was about a line and a half, tapering away to the edges, which were exceedingly fragile. At its outer edge a well-marked foramen existed, for the passage of the retina to the optic nerve.

In each of these cases enucleation was undertaken, not to relieve any existing serious disease, but to guard against a sympathetic affection, the occurrence of which was considered probable. Sympathetic ophthalmia, or that form of inflammation which arises in one eye in consequence of traumatic inflammation of its fellow, has been of late the subject of careful investigation at the hands of several distinguished observers. An obstinate and slow affection, prone to relapses, exercising a most disastrous effect on vision, and—when fairly established—resisting treatment of whatever nature, it can only be averted with certainty by the excision of the eye that is likely to produce it.

According to Von Graefe, the most common causes of sympathetic ophthalmia are:—

1st. The presence of a foreign body as a permanent source of irritation.

2d. The form of inflammation of the iris and ciliary bodies known under the name of "irido-cyclitis," especially liable to occur when the seat of injury is near the ciliary region.

3d. Recurrent intra-ocular hæmorrhages, with rapid changes of tension.

4th. The presence of bony concretions.

Both the cases now reported come under one of these headings, and it is probable that had enucleation not been resorted to, the vision of the other eye would ultimately have become impaired. In brief, the principle may now be regarded as established, that "in injuries of the eye which give rise to a lengthy irritation, particularly those involving the ciliary region, the injured eye should be removed, even though its fellow have not become affected, to avert intractable inflammation and danger of entire blindness."

Dr. Dunlap, of Springfield, Ohio, has experienced most gratifying effects from the use of permanganate of potash in the treatment of "spotted fever," as it appeared recently in that city. In the more malignant cases, the dose was from $\frac{1}{8}$ to $\frac{1}{2}$ gr. frequently repeated.

DR. GAILLARD'S PRIZE ESSAY ON OZONE; ITS RELATIONS TO HEALTH AND DISEASE.

[Continued from page 256.]

However the various branches of the subject of ozone may interest the chemist and philosopher, it is to its therapeutic and hygienic relations that the physician turns for study and examination. We propose, then, to make these, with the physiological relations of ozone, the concluding portions of our essay.

We have seen that ozone is a direct stimulant to animal and vegetable life. We know that the most vital changes take place during the aëration of the blood in its passage through the lungs, and we can readily appreciate the effect which must be produced by the exposure of this fluid to a highly oxygenated gas. It is natural that the inhalation of ozone should have been first attempted, in producing the effect of this agent upon the animal economy. It must be recollected, however, that one 2000th part of ozone in an atmosphere would make it fatal to small animals; and very little more than this, fatal to man. In an atmosphere giving 10 as the register of the ozonometer, ozone exists in the proportion of one 10,000th part. The point of vital difficulty is to charge an atmosphere with a sanitary amount of ozone, and to avoid the possibility of this being exceeded. It is possible to charge the atmosphere of a room to any required degree of the ozonometer, but it has so far been found impracticable to avoid the diffusion of ozone to an unsafe degree. Its therapeutical use, by inhalation, has not been sufficiently practicable or safe to render its adoption advisable. Experiments are constantly being made, with a view of obviating these difficulties, and of introducing ozonized air into hospitals, ships in dangerous latitudes, and localities requiring a safe and efficient disinfectant. Ozonized oil of turpentine has frequently been used for these purposes, but there are objections to its odor and want of ozonic concentration which must prevent its general introduction. Experiments of the most promising and interesting character in this connection are now being made by Dr. Richardson, of London. He uses ozone, as found in peroxide of hydrogen, formed by the action of hydrochloric acid on the peroxide of barium. Ozone and the peroxide of hydrogen, he considers one and the same thing. Ozone is thus introduced in a concentrated state into water, and we have therefore a simple and efficient mode of using this agent. It forms, in this condition, a powerfully deodorizing lotion. As a disinfectant and deodorizer, it promises the best results. It is chiefly interesting, however, in its physiological and therapeutical relations, and we will for the present postpone its farther consideration.

It will be seen that ozone must soon become popularly known and appreciated for its hygienic properties. The air coming from the sea is highly ozonized; ozone being there largely formed, and but little consumed. The cheering effect of sea-air was known and advised by the earliest writers of the profession, who not appreciating the cause, yet by a vague compliance with the teachings of tradition, happily profited by its effects.

M. Schönbein has submitted to the Society of Naturalists at Bâle the results of many experiments in regard to the effect of ozonized oil of turpentine upon the animal economy. These experiments are certified by Professors Seitz and Fraas, of Munich. The ozonized oil of turpentine was thus prepared by them:—"The oil of turpentine is placed in white bottles, of which it fills only the quarter or half of each bottle, and is then freely exposed to sunlight. From time to time, each bottle is opened, so that the atmospheric air may have free ingress. The oil thus prepared has the smell and taste of peppermint oil; smelling disagreeably, tasting hot and bitter, and giving to the tongue a peculiar sensation of pain and cold." From experiments on animals, it is found that on the mucous membrane of the mouth and digestive organs, the ozonized oil acts like the simple oil, irritating and causing an increased flow of saliva and mucus. "It is rapidly absorbed; the pulse increases in fulness and frequency; the respirations are quickened, and, where large quantities are given, become painfully rapid." If the doses are frequently repeated, inflammation of the endocardium and pericardium ensues, with dangerous congestion of the lungs. Small doses act as excitants to the nervous system, but large doses cause paralysis, convulsions, stupor and death.

Seitz, in his experiments with the ozonized oil of turpentine, discovered facts of therapeutic value. The simple and ozonized oils he found passed off through the kidneys and lungs; giving to the secretions of the kidney the usual violet odor, and, to the exhalations from the lungs, the smell of the ordinary oil. The ozonized oil was given, with good effect, in chronic cystitis and in incontinence of urine, in menorrhagia and hæmatemesis, in gout and rheumatism. In sciatica, it produced speedy relief, and was found very beneficial in vesical catarrh, hæmaturia, and many other vesical disorders. It has given marked relief in facial neuralgia. The dose, for these purposes, is from ten to thirty drops, in an emulsion or on sugar. Seitz especially recommends it in gout and rheumatism. According to the testimony of Schnepf and Abt, of Vienna, twenty to thirty drops of the ozonized oil are quite sufficient for arresting mortal hæmorrhages; this testimony is endorsed by Eschach and Knolz, of the same city. The ozonized oil relieves, very frequently, chronic discharges from the mucous passages. Dr. Richardson, in his use of the aqueous solution of ozone (peroxide of hydrogen in water) finds it "an antidote for the alkaloidal poisons"; that as an "external application to decomposing sores, as an internal remedy in fever, where the patient literally dies from deficient oxygen, and in diabetes, *the medicine* might be used with the very best promises of success. In the way of a pleasant, acid drink, one could give, to the typhus-stricken man, 100 cubic inches of active oxygen per hour. In diabetes, under the administration of this remedy, the quantity of sugar at once became less, and the excretion of urine decreased." Tetanus and other diseases are mentioned, but these facts are quite sufficient to awaken an interest in the therapeutic applications of the aqueous solution of ozone. It is given as prepared by Dr. Richardson, and detailed in an early part of this essay ("charged with ten volumes of the peroxide"), in doses of from one to four fluid drachms in distilled water. It is given compatibly with all the mineral acids. From the effects of oxygen on albumen, fibrin, and on the blood, it would not be irrational to conclude that ozone should have a happy effect on the lymphatic, chlorotic and anæmic; on all of those who suffer from the devitalizing influences of imperfect sanguification. These results have not, until recently, been very successful or important, but after years of hope and disappointment, experiment and defeat, the sanguine expectations of many are about to be realized.

We have received from Dr. Theophilus Thompson, Physician to the Hospital for Consumption, London, the results of his observations on the medical administration of ozonized oils. The sanguine and the skeptical will each be interested in the simple record of his experience. Dr. Thompson, in his experiments, used oil ozonized after the method of Mr. Dugald Campbell. This does not sufficiently differ from the manner of preparing ozonized oil of turpentine, as recommended by Seitz and others, to render a detailed description necessary. It is only necessary to say, that the oils were *first* saturated with simple oxygen, and then exposed, for a long time, to the direct rays of the sun. One indication of the satisfactory progress of the process is the appearance, says Dr. Thompson, "of a peculiar acid, watery-looking fluid at the bottom of the vessel; it may also be mentioned, that the fact of the oils being charged with ozone can be rendered obvious by the usual tests; the bleaching properties which they possess and the action which they exert upon preparations of iodide of potassium and starch." We will give brief extracts from cases sent us, and a few conclusions which their history suggests.

Case.—Male; laborer; æt. 33; phthisis in the first stage; dull percussion, prolonged expiratory murmur, wavy inspiration, increased vocal resonance on the right side. Admitted October 8th. Took salines for two days; then two drachms of ozonized sunflower oil, twice a day. Pulse reduced in a few days from 104 to 92. Left hospital on Oct. 22d.

Case.—Similar to last; weight seven stone, twelve and a quarter pounds. Took salines; then ozonized sunflower oil, three times a day. Pulse 118; in ten days fell to 102; in four days from this, 86; weight increased one pound and a quarter. The ozonized oil becomes exhausted; in three days pulse rises to 108.

CASE.—Age, 8. Vomica of right lung, with tubercular deposition. Took cod-liver oil twice a day, oil being ozonized. In three days pulse fell from 120 to 100. Oil was then given three times a day; in less than a week, the pulse was reduced to 80.

CASE.—Age, 28. Vomica and softened tubercle. Under the use of ozonized oils, pulse not influenced; 90 throughout.

CASE.—Tubercular deposit in both lungs, advanced to softening on one side. Admitted Sept. 22d; weight nine stone and a half pounds. Took simple cod liver oil to Dec. 10th; pulse 112. Ordered ozonized oil; pulse gradually fell to 76. On Jan. 6th, simple cod-liver oil resumed; pulse on the 13th 108. Ozonized oils resumed; on 15th, 17th and 19th pulse fell to 88; then to 84. Ozonized oil withdrawn, and simple coco-oleine then given; pulse rose to 92. Ozonized coco-oleine given; pulse falls to 86.

CASE—Phthisis. Took simple cod-liver oil for three weeks; pulse 90. Ozonized oil given; pulse falls to 68.

CASE.—Under the use of ozonized oils pulse at 100; oils discontinued, pulse rises to 110.

These cases, as is obvious, are not selected; the full effect and the want of effect in the treatment being *both* detailed. There are many more given by Dr. Thompson, but we wish to avoid detail. We have, for a faithful representation of the subject, given cases exhibiting the varied effects of the therapeutical administration of the ozonized oils. We have given the most unfavorable cases reported by Dr. Thompson, and have certainly selected many that were not the most favorable.

It is proper to give the testimony of Dr. Scott Alison, who had charge of the Hospital, during the temporary absence of Dr. Thompson. "Under my directions, only four of the patients had ozonized oil given in such a manner as to be likely to afford any result. Unfortunately, all of the patients were in the third stage of the disease, and no lasting benefit was experienced. In two cases, a remarkable reduction in the frequency of the pulse took place, during the use of the ozonized oils—the reduction amounting to about twenty-five beats—whilst the improvement could not be referred to any other cause. I attach some value to this observation, for I prescribed the oil, totally divested of all prejudice in its favor, and I have always been reluctant, on imperfect grounds, to refer results to the operation of medicines. If ozonized oil can reduce the rapidity of the circulation, a feature of great importance in phthisis, this remedy possesses a most valuable property; rendered still more valuable by its contributing to improve the general health."

Dr. Thompson observes, that in order to appreciate the evidence adduced, it is important to notice that in some of the patients the use of simple and ozonized oil was more than once alternated, with a marked and corresponding variation of effect. In one case, the alternation was made three times, and the result was so direct and remarkable as to make this particular case equivalent, in value, to three cases. It is impossible to review the history of these cases without being convinced *that the administration of ozonized oils has a most remarkable tendency to reduce the frequency of the pulse, in addition to producing a decided improvement in the general health and condition of the consumptive patient.* In fourteen of the cases, sent by Dr. Thompson, there are *only two* in which no effect of this kind was produced. In the majority of instances the improvement was marked, and must be attributed only to the ozone, and not to the oil, since it was manifested in patients who had taken cod-liver oil and other oils, without any reduction in the frequency of the pulse; in some, under the use of simple oils the pulse was even accelerated, and under the administration of ozonized oil became immediately reduced. The effect on the pulse was nearly as distinct, when ozone was associated with cocoa-nut oil, or sun-flower oil, as it was with the cod-liver oil. The oils first mentioned produce no effect unless associated with ozone.

The reduction in the frequency of the pulse, produced by the administration of ozonized oils, is indeed remarkable. It is usually observable in two or three days. Dr. Thompson states, in connection with this subject, that "a reduction of twenty beats was observed, in certain cases, in two, three, four and six days: in other instances, there was a reduction of twenty-four pulsations in fourteen days; of thirty-four pulsations in thirteen days; of thirty-six pulsations in twenty-two days; and of forty pulsations in eleven days." In one patient, the pulse fell to 60; in most of the favorable cases, the reduction ceased when the normal standard was attained. This abstract, of Dr. Thompson, is of course taken from a large aggregate of cases. Such facts require no comment. We shall give none; for they demonstrate truths which cannot be misinterpreted or misunderstood.

[To be continued.]

ON THE NORMAL MOTIONS OF THE HUMAN EYE.

By Prof. Hermann Helmholtz, For. Memb. R.S.

The motions of the human eye are of considerable interest, as well for the physiology of voluntary muscular motion in general, as for the physiology of vision. Therefore I may be allowed to bring before this Society the results of some investigations relating to them, which I have made myself; and I may venture, perhaps, to hope that they are such as to interest not only physiologists and medical men, but every scientific man who desires to understand the mechanism of the perceptions of our senses.

The eyeball may be considered as a sphere, which can be turned round its centre as a fixed point. Although this description is not absolutely accurate, it is sufficiently so for our present purpose. The eyeball, indeed, is not fixed during its motion by the solid walls of an articular excavation, like the bone of the thigh; but, although it is surrounded at its posterior surface only by soft cellular tissue and fat, it cannot be moved in a perceptible degree forward and backward, because the volume of the cellular tissue, included between the eyeball and the osseous walls of the orbit, cannot be diminished or augmented by forces so feeble as the muscles of the eye are able to exert.

In the interior of the orbit, around the eyeball six muscles are situated, which can be employed to turn the eye round its centre. Four of them, the so-called *recti* muscles, are fastened at the hindmost point of the orbit, and go forward to fix themselves to the front part of the eyeball, passing over its widest circumference—or its equator, as we may call it, if we consider the foremost and hindmost points of the eyeball as its poles. These four *recti* muscles are from their position severally named superior, inferior, internal and external. Besides these, there are two *oblique* muscles, the ends of which come from the anterior margin of the orbit on the side next the nose, and, passing outwards, are attached at that side of the eyeball which is towards the temple—one of them, the superior oblique muscle, being stretched over the upper side of the eyeball, the other, or inferior, going along its under side.

These six muscles can be combined as three pairs of antagonists. The internal and external *recti* turn the eye round a perpendicular axis, so that its visual line is directed either to the right side or to the left. The superior and inferior *recti* turn it round a horizontal axis, directed from the upper end of the nose to the temple; so that the superior *rectus* elevates the visual line, the inferior depresses it. Lastly, the *oblique* muscles turn the eye round an axis which is directed from its centre to the occiput, so that the superior oblique muscle lowers the visual line, and the inferior raises it; but these last two muscles not only raise and lower the visual line; they produce also a rotation of the eye round the visual line itself, of which we shall have to speak more afterwards.

A solid body, the centre of which is fixed, and which can be turned round three different axes of rotation, can be brought into every possible position consistent with the immobility of its centre. Look, for instance, at the motions of our arm, which are provided for at the shoulder-joint by the gliding of the very accurately spherical upper extremity of the humerus in the corresponding excavation of the scapula. When we stretch out the arm horizontally, we can turn it, first, round a perpendicular axis, moving it forwards and backwards; we can turn it, secondly, round a horizontal axis, raising it and lowering it; and, lastly, after having brought it by such motions into any direction we like, we can turn it round its own longitudinal axis, which goes from the shoulder to the hand; so that even when the place of the hand in space is fixed, there are still certain different positions in which the arm can be turned.

Now let us see how far the motions of the eye can be compared to those of our arm. We can raise and lower the visual line, we can turn it to the left and to the right, we can bring it into every possible direction, throughout a certain range—as far, at least, as the connections of the eyeball permit. So far the motions of the eye are as free as those of the arm. But when we have chosen any determinate direction of the eye, can we turn the eye round the visual line as an axis, as we can turn the arm round its longitudinal axis?

This is a question the answer to which is connected with a curious peculiarity of our voluntary motions. In a purely mechanical sense, we must answer this question in the affirmative. Yes, there exist muscles by the action of which those rotations round the visual line can be performed. But when we ask, "Can we do it by an act of our will?" we must answer, "No." We can voluntarily turn the visual line into every possible direction, but we cannot voluntarily use the muscles of our eye in such a way as to turn it round the visual line. Whenever the direction of the visual line is fixed, the position of our eye, as far as it depends upon our will, is completely fixed and cannot be altered.

This law was first satisfactorily proved by Professor Donders, of Utrecht, who, in a very ingenious way, controlled the position of the eye by those ocular spectra which remain in the field of vision after the eye had been fixed steadily during some time upon any brightly colored object. I have used for this purpose a diagram, of which the ground is grey paper, and in the middle is placed a narrow strip of red paper on a broader strip of green paper. The centre of the red strip is marked by two black points. When you look for about a minute steadily, and without moving your eye, at the centre of the diagram, the image of the colored strips is projected on the nervous membrane of your eye; those parts of this membrane on which the light falls are irritated, and in consequence of this irritation, their irritability is exhausted, they are fatigued, and they become less sensitive to that kind of light by which they were excited before. When you cease, therefore, to look at the colored strips, and turn your eye either to the grey ground of the diagram, or to any other part of the field of vision which is of a uniform feeble degree of illumination, you will see a spectrum of the colored strips, exhibiting the same apparent magnitude, but with colors reversed, a narrow green strip being in the middle of a broader red one. The cause of this appearance is, that those parts of your retina which were excited formerly by green light are less affected by the green rays contained in white or whitish light than by rays of the complementary color, and white light, therefore, appears to them reddish; to those parts of the nervous membrane, on the other hand, which had been fatigued by red light, white light afterwards appears to be greenish. The nervous membrane of the eye in these cases behaves nearly like the sensitive stratum in a photographic apparatus, which is altered by light during the exposure in such a way that it is impressed differently afterwards by various agents; and the impression of light on the retina may be, perhaps, of the same essential nature as the impression made upon a photographic plate. But the impressiom made on the living eye does not last so long as that on sensitive compounds of silver; it vanishes very soon if the light be not too strong. Light of great intensity, like that of the sun when directly looked at, can develope very dark ocular spectra, which last a quarter of an hour, or even longer, and disturb the perception of external objects very much, as is well known. One must be very careful to avoid the use of too strong a light in these experiments, because the nervous apparatus of the eye is easily injured by it; and the brightness of these colored strips, when illuminated by common daylight, is quite sufficient for our present purpose.

Now you will perceive easily that these ocular spectra are extremely well adapted to ascertain the position of the eyeball, because they have a fixed connection with certain parts of the retina itself. If the eyeball could turn about its visual line as an axis, the ocular spectrum would apparently undergo the same degree of rotation; and hence, when we move about the eye, and at last return to the same direction of the visual line, we can recognize easily and accurately whether the eye has returned into the same position as before, or whether the degree of its rotation round the visual line has been altered. Professor Donders has proved, by using this very delicate test, that *the human eye, in its normal state, returns always into the same position when the visual line is brought into the same direction.* The position and direction of the eye are to be determined in this case in reference to the head of the observer; and I beg you to understand always, when I say that the eye or its visual line is moved upwards or downwards, that it is moved either in the direction of the forehead or in that of the cheek; and when I say it is moved to the left or to the right, you are to understand the left or right side of the head. Therefore, when the head itself is not in its common vertical position, the vertical line here understood is not accordant with the line of the plummet.

Before the researches of Donders, some observers believed they had found a difference in the relative positions of the eye, when the head was brought into different situations. They had used either small brown spots of the iris, or red vessels in the white of the eye, to ascertain the real position of the eyeball; but their apparent results have been shown to be erroneous by the much more trustworthy method of Donders.

In the first place, therefore, we may state that the position of the eyeball depends exclusively upon the direction of the visual line in reference to the position of the head of the observer. But now we must ask, what is the law regulating the position of the eye for every direction of its visual line? In order to define this law, we must first notice that there exists a certain direction of the visual line, which, in relation to the motions of the eye, is distinguished from all other directions of the eye; and we may call it the *central* or *primary direction of the visual line.* This direction is parallel to the median vertical plane of the head; and it is horizontal when the head of the observer, who is standing, is kept in a convenient erect position to look at distant points of the horizon. How this primary direction of the visual line may be determined practically with greater accuracy we shall see afterwards. All other directions of the visual line we may call *secondary directions.*

A plane which passes through the visual line of the eye, I call *a meridian plane* of the eye. Such a plane cuts through the retina in a certain line; and when the eye has been moved, we consider as the same meridian plane that plane which passes through the new direction of the visual line and the same points of the retina as before.

After having given these definitions, we may express the law of the motions of the eye in the following way:—

Whenever the eye is brought into a secondary position, that meridian plane of the eye which goes through the primary direction of the visual line has the same position as it has in the primary direction of the eye.

It follows from this law that the secondary position of the eye may be found also by turning the eye from its primary position round a fixed axis which is normal as well to the primary as to the secondary of the visual line.

It would take too long to explain the different ways in which different observers have tried to determine the law of the motions of the eyeball. They have employed complicated apparatus for determining the angles by which the direction and the rotation of the eye were to be measured. But usually two difficulties arise from the use of such instruments containing graduated circles, in the centre of which the eye must be kept steady. In the first place, it is very difficult to fix the head of the observer so firmly that he cannot alter its position during a continuous series of observations, and that he reassumes exactly the same position of the head when he returns to his measurements after a pause—conditions which must necessarily be fulfilled if the observations are to agree with each other. Secondly, I have found that the eye must not be kept too long a time in a direction which is near to the limits of the field of vision; else its muscles are fatigued, and the positions of the eyeball corresponding to different directions of the visual line are somewhat altered. But if we have to measure angles on graduated circles, it is difficult to avoid keeping the eye too long in directions deviating far from the primary direction.

I think that it depended upon these causes, that the observations carried out by Meissner, Fick and Wundt agreed very ill with each other and with the law which I have explained above, and which was first stated by Professor Listing of Göttingen, but without any experimental proof. Happily, it is possible, as I found out, to prove the validity of this law by a very simple method, which is not subject to those sources of error I have named, and which I may be allowed to explain briefly.

In order to steady the attitude of the head in reference to the direction of the visual line, I have taken a little wooden board, one end of which is hollowed into a curve fitting the arch of the human teeth; the margin of this hollow is covered with sealing wax, into which, after it had been softened by heat and had been cooled again sufficiently, I inserted both series of my teeth, so that I kept it firmly between my jaws. The impressions of the teeth remain indented in the sealing-wax; and when I put my teeth afterwards into these impressions, I am sure that the little board is brought exactly into the same position, relatively to my head and my eyes, as it was before. On the other end of that little board, which is kept horizontally between the teeth, a vertical piece of wood is fastened, on which I fix horizontally a little strip of card pointed at each end, so that these two points are situated about five inches before my eyes, one before the right eye, the other before the left. The length of the strip of card must be equal to the distance between the centres of the eyes, which is 68 millimetres for my own eyes. Looking now with the right eye in the direction of the right point of that strip, and with the left eye in the direction of the left point, I am sure to bring the eyes always into the same position relatively to my head, so long as the position of the strip of card on the wooden piece remains unaltered.

As a field of vision I use either a wall covered with a grey paper, in the pattern of which horizontal and vertical lines can be easily perceived, or a drawing-board covered with grey drawing-paper, on which a system of horizontal and vertical lines is drawn, and colored stripes are fastened along a central perpendicular line *a b*.

Now the observer at first must endeavor to find out that position of his eyes which we call the primary position. In order to do this, the observer takes the wooden piece between his teeth, and brings his head into such a position that his right eye looks to the centre of the colored stripes, in a direction perpendicular to the plane of the drawing. Then he brings his head into such an attitude that the right end of the card-strip appears in the same direction as the centre of the colored stripe. After having steadily looked for some time to the middle of the colored stripe, he turns away his gaze to the end of either the vertical or horizontal lines, which are drawn through the centre of the colored stripe. There he will see an ocular spectrum of the colored stripe, and will observe if it coincides with the horizontal lines of the drawing. If not, he must alter the position of the strip of card on the wooden bar to which it is fastened, till he finds that the ocular spectrum of the colored stripe remains horizontal when any point either of the line *a b* or the central horizontal line *c d* is looked at. When he has thus found the primary direction of his visual line for the right eye, he does the same for the left.

The ocular spectra soon vanish, but they are easily renewed by looking again to the centre of the stripes. Care must be taken that the observer looks always in a direction perpendicular to the plane of the drawing whenever he looks to the centre of the colored stripe, and that he does not move his head. If he should have moved it, he would find it out immediately when he looks back to the strip, because the point of the card-strip would no longer cover the centre of the colored stripe.

So you see that the primary direction of the visual line is completely fixed, and that the eye, which wants only to glance for an instant at a peripheral point of the drawing, and then goes back again to the centre, is not fatigued.

This method of finding the primary position of the eye proves at the same time that vertical and horizontal lines keep their vertical or horizontal position in the field of vision when the eye is moved from its primary direction vertically or horizontally; and you see, therefore, that these movements agree with the law which I have enunciated. That is to say, during vertical movements of the eye the vertical meridian plane keeps its vertical position, and during horizontal movements the horizontal meridian.

Now you need only bring either your own head into an inclined position, or the diagram with the lines, and repeat the experiment, putting your head at first into such a position that the centre of the diagram corresponds with the primary direction of the visual line, and moving afterwards the eye along the lines *a b* or *c d*, and you will find the ocular spectrum of the colored line coinciding with those black lines which are parallel with *a b*. In this way, therefore, you can easily prove the law of Listing for every possible direction of the visual line.

I found the results of these experiments in complete agreement with the law of Listing for my own eyes, and for those of several other persons with normal power of vision. The eyes of very short-sighted persons, on the contrary, often show irregularities, which may be caused by the elongation of the posterior part of those eyes.

These motions of our eyes are a peculiar instance of motions, which, being quite voluntary, and produced by the action of our will, are nevertheless limited as regards their extent and their combinations. We find similar limitations of motion of the eyes in other cases also. We cannot turn one eye up, the other down; we cannot move both eyes at the same time to the outer angle; we are obliged to combine always a certain degree of accommodation of the eyes to distance, with a certain angle of convergence of their axes. In these latter cases it can be proved that the faculty of producing these motions is given to our will, although our will is not commonly capable of using this faculty. We have come by experience to move our eyes with great dexterity and readiness, so that we see any visible object at the same time single and as accurately as possible; this is the only end which we have learnt to reach by muscular exertion; but we have not learnt to bring our eyes into any given position. In order to move them to the right, we must look to an object situated on our right side, or imagine such an object and search for it with our eyes. We can move them both inwards, but only when we strive to look at the back of our nose, or at an imaginary object situated near that place. But commonly there is no object which could be seen single by turning one eye upwards, the other downwards, or both of them outwards, and we are therefore unable to bring our eyes into such positions. But it is a well-known fact, that when we look at stereoscopic pictures, and increase the distance of the pictures by degrees, our eyes follow the motion of the pictures, and that we are able to combine them into an apparently single object, although our eyes are obliged to turn into diverging directions. Professor Donders, as well as myself, has found that when we look to a distant object, and put before one of our eyes a prism of glass, the refracting angle of which is between 3 and 6 degrees, and turn the prism at first into such a position before the eye that its angle looks to the nose and the visual lines converge, we are able to turn the prism slowly, so that its angle looks upwards or downwards, keeping all this time the object apparently single at which we look. But when we take away the prism, so that the eyes must return to their normal position before they can see the object single, we see the object double for a short time—one image higher than the other. The images approach after some seconds of time and unite at last into one.

By these experiments it is proved that we can move both eyes outward, or one up and the other down, when we use them under such conditions that such a position is required in order that we may see the objects single at which we are looking.

I have sometimes remarked that I saw double images of single objects, when I was sleepy and tried to keep myself awake. Of these images one was sometimes higher than the other, and sometimes they were crossed, one of them being rotated round the visual line. In this state of the brain, therefore, where our will begins to lose its power, and our muscles are left to mere involuntary and mechanical impulses, an abnormal rotation of the eye round the visual line is possible. I infer also from this observation, that the rotation of the eye round the visual axis cannot be effected by our will, because we have not learnt by which exertion of our will we are to effect it, and that the inability does not depend on any anatomical structure either of our nerves or of our muscles which limits the combination of motion. We should expect, on the contrary, that, if such an anatomical mechanism existed, it should come out more distinctly when the will has lost its power.

We may ask, therefore, if this peculiar manner of moving the eyes, which is determined by the law of Listing, is produced by practical exercise on account of its affording any advantages to visual perceptions. And I believe that certain advantages are indeed connected with it.

We cannot rotate our eyes in the head, but we can rotate the head with the eyes. When we perform such a motion, looking steadily to the same point, we remark that the visible objects turn apparently a little round the fixed point, and we lose by such a motion of our eye the perception of the steadiness of the objects at which we look. Every position of the visual line is connected with a determined and constant degree of rotation, according to the law of Donders; and in altering this rotation we should judge the position of external objects wrongly.

The same will take place when we change the direction of the visual line. Suppose the amplitude of such motions to be infinitely small; then we may consider this part of the field of vision, and the corresponding part of the retina on which it is projected, as plane surfaces. If during any motion of the eye the optic image is displaced so that in its new position it remains parallel to its former position on the retina, we shall have no apparent motions of the objects. When, on the contrary, the optic image of the visible objects is dislocated so that it is not parallel to its former position on the retina, we must expect to perceive an apparent rotation of the objects.

As long as the motions of the eye describe infinitely small angles, the eye can be moved in such a way that the optic image remains always parallel to its first position. For this end the eye must be turned round axes of rotation which are perpendicular to the visual line; and we see indeed that this is done, according to the law of Listing, when the eye is moving near its primary position. But it is not possible to fulfil this condition completely when the eye is moved through a wider area which comprises a larger part of the spherical field of view. For if we were to turn the eye always round an axis perpendicular to the visual line, it would come into very different positions after having been turned through different ways to the same final direction.

The fault, therefore, which we should strive to avoid in the motions of our eye, cannot be completely avoided, but it can be made as small as possible for the whole field of vision.

The problem, to *find such a law for the motions of the eye that the sum of all the rotations round the visual line for all possible infinitely* *small motions of the eye throughout the whole field of vision becomes a minimum*, is a problem to be solved by the calculus of variations. I have found that the solution for a circular field of vision, which corresponds nearly to the forms of the actual field of vision, gives indeed the law of Listing.

I conclude from these researches, that the actual mode of moving the eye is that mode by which the perception of the steadiness of the objects through the whole field of vision can be kept up the best; and I suppose, therefore, that this mode of motion is produced by experience and exercise, because it is the best suited for accurate perception of the position of external objects.

But in this mode of moving, rotations round the visual line are not completely avoided when the eye is moved in a circular direction round the primary position of the visual line; and it is easy to recognize that in such a case we are subject to optical illusions.

Turn your eyes to a horizontal line situated in the highest part of the field of vision, and let them follow this line from one end to the other. The line will appear like a curved line, the convexity of which looks downward. When you look to its right extremity, it seems to rise from the left to the right; when you look to the left extremity of the line, the left end seems to rise. In the same way, all straight lines which go through the peripheral parts of the field of vision appear to be curved, and to change their position a little, if you look to their upper or their lower ends.—*Proceedings of the Royal Society.*

[To be continued.]

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 3, 1864.

Proceedings of the Nineteenth Annual Meeting of the Ohio State Medical Society, June 21st and 22d, 1864.—A pamphlet of some 90 pages is rather a small annual contribution from the Society of so large a State as Ohio, but better a small publication, if it be a good one, than a large, dilute, watery one. The one before us contains several papers of merit and practical value.

The Valedictory Address by the retiring President, Dr. W. P. Kincaid, is in the usual strain of such compositions. It is to our minds a positively cruel custom which exists in some of our State Societies, which compels the retiring President, on each recurring anniversary, to reiterate the old commonplaces pertaining to the dignity, the great responsibilities and high moral standing of the medical profession, and to make an effort at eloquence in attempting to stir up his audience to a fresh appreciation of them. In the address before us, the author bestows the usual attention on these topics, and dwells with a good deal of emphasis, also, on the value of a general education to a physician, as an indispensable preparation for his profession, but one which we are led to infer has only of late come to be considered of much importance in Ohio. Most cordially do we agree with the honored Ex-President in this, and hope his words may sink down into the hearts of his hearers and readers.

A Report on Diseases of the Eye, by Dr. A. Metz, of Masillon, seems to have been prepared by one thoroughly conversant with his subject. Considerable space in this article is given to the subject of strabismus, the object being to show that the text-books are far behind the actual state of knowledge and practice in this important operation. It contains abstracts from several recent publications of authority, and may be profitably consulted by any surgeon who looks upon the operation as a very simple one and to be done in the same manner, whatever the amount of deviation, or the condition of the antagonist muscle. The author also very properly speaks at some length on the subject of glaucoma, not so much to enunciate any new views, as to enlighten his hearers (of whom it is quite likely some were not before so fully informed) with regard to the great gravity of this obscure affection and the vital importance of prompt surgical interference to save the sight of those attacked by it. He quotes from his own experience a case under the care of a respectable physician, who positively refused to allow him to operate until all inflammation had subsided, and two others in which saline purgatives and lead collyria comprised the whole treatment employed by the general practitioners into whose hands they were so unfortunate as to fall.

A Report on New Remedies, by Dr. Edward B. Stevens, of Cincinnati, speaks favorably of phloridzine as a substitute for quinia, and recommends it for its cheapness, and as being tolerated where quinia is not. The author discusses the alleged virtues of *saracenia purpurea* as a remedy for smallpox, and comes to the sensible conclusion that they exist rather in imagination than in reality. Other remedies which have come into prominent notice of late are duly considered.

A report from Dr. Thaddeus A. Reamy, of Zanesville, Ohio, on Asthma, is the next paper in order. The author was appointed a Committee on this subject, probably because he had been himself a sufferer from this terrible malady. An attempt on his part to elicit the views of his medical brethren of Ohio on this subject resulted in his getting but five answers to the circular which he issued ; a result certainly speaking very little for the professional courtesy, to say the least, of those to whom it was addressed. He offers no views on the pathology of this disease which can claim the interest of novelty, but accepts the theory of bronchial spasm as being at the foundation of it. In the course of his remarks on treatment he says of the use of remedies :

" The articles selected ought to be chosen according to the symptoms of each case, and their known effect upon the patient. I have in this connection to urge their early employment, because more than half the attacks of asthma can be cut short by a full dose of ipecac, if the remedy be employed when the first arrears in breathing are experienced. Attention is called to this fact by Dr. Salter, and in my own practice I have witnessed repeated proofs of its importance. I have a case under my care at this time—a lady who has been a sufferer for five years—the attacks approaching regularly every three months, and lasting from six to ten days with great severity. So far the intervals have been complete. For twelve months she has had no attack lasting more than an hour, and not severe. The ipecac has been promptly administered at the very outset of each attack, in sufficient quantity to insure vomiting, and the spasm at once arrested. I cannot too strongly urge upon my professional brethren the importance of this simple rule in treatment. The asthmatic tendency may be completely thwarted in many cases, and the patient escape untold agony, simply because the remedy acts before great pulmonary congestion has occurred. Urge upon your patient to take the medicine, whether it be day or night, immediately upon the first symptom of dyspnœa."

Of the internal use of nitrate of potash in asthma, Dr. Reamy has a very favorable opinion. We quote him as follows :—

"I have prescribed this article in forty-eight cases with the following results :—Ten cases have fully recovered. Sixteen have been materially improved, the intervals becoming longer and the attacks milder. In the remaining twenty-two cases no manifest improvement has been discovered. Most of the cases which have recovered were complicated either with dyspepsia or bronchitis, some of them with both. This may partly explain the success of the remedy; for although I cannot believe that either of these diseases can beget the nervous asthmatic predisposition, I can easily understand how they may call it into action where it exists. And I have found no article of the materia medica more effectual in subduing chronic bronchial inflammation than nitrate of potash. And notwithstanding the almost universally received opinion that whatever opposes putrefaction out of the body, retards digestion in the body, I have long prescribed this article in asthenic dyspepsia with the happiest effects. It stimulates to healthy action the feeble stomach. It has been my custom to dissolve an ounce of the salt (pure) in a pint of distilled water, and order of the resulting solution a tablespoonful three times daily after meals. In this way it will be seen that fifteen grains of the salt are administered at a dose well diluted. Precisely how it acts in curing asthma I do not know. The remedy seems to have no direct effect upon the paroxysms of the disease, and I never prescribe it for immediate relief. In order to success, it must be continued several months, during the interval as well as during the paroxysm. Gradually the paroxysms grow lighter, the interval longer, the stomach and bowels assume a more healthy condition. The bronchial inflammation, where it exists, yields, and the patient at last finds himself free from a malady which renders life a burden. Whether this article acts solely by influence upon the bronchial irritation and diseased stomach, and therefore becomes useless except in cases thus complicated, I cannot say, as my experience has not been sufficient to determine. I have already said that these complications seemed to exist in the cases which recovered in my hands. Whether in the very important changes wrought in the blood, a new nervous force results, and therefore a destruction of that peculiar asthmatic nervous susceptibility, I cannot determine; such a state of affairs, however, may be possible. As the patient is not protected from the influence of atmospheric change by any precaution as to clothing or otherwise, an increased activity in the secretion of urine is generally found, and I suspect that the kidneys play no unimportant part in the 'good work.' I may be pardoned for adding that among the fortunate cures effected by this remedy, your Committee gratefully stands. After four years of untold suffering I completely recovered, and have now been clear of the disease more than three years, with no threatenings of a return. I hope members of the profession will give nitrate of potash a fair and impartial trial, and make known the results of their observations. I am sanguine that much good can be done with this article. I do not regard it as a specific. I do not believe in specifics. I do not suppose that half the cases of asthma will be materially improved by its most judicious employment. And yet if a radical cure of one fiftieth of the cases can be effected, incalculable suffering will be avoided."

A case of Gun-shot Wound, with a fatal result, attributed by the author to delayed amputation, closes these Transactions. Judging from its tone, we are led to think he is disposed to generalize from too limited a number of facts.

A Convention of dentists from different parts of Connecticut was held in Hartford, Oct. 20th, for the purpose of organizing a State Dental Society. A permanent organization was effected as follows:— President, Dr. A. D. Hill, Norwalk; Vice President, W. W. Sheffield, New London; Recording Secretary, James McManus, Hartford; Corresponding Secretary, L. D. Pelton, Hartford; Treasurer, E. E. Crofoot, Hartford; Librarian, Charles P. Graham, Middletown; Executive Committee, Drs. Mallett, Metcalf and Stephens. The first annual meeting of the Society will be held in Hartford on the third Tuesday in May, 1865.

The operation of lithotomy was recently performed in Norwich, Ct., by Dr. C. M. Carleton, of that city—the stone being of the "mulberry" class, and weighing 331 grains.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, October 29th, 1864.

DEATHS.

	Males.	*Females.*	*Tota*
Deaths during the week	49	36	85
Ave. mortality of corresponding weeks for ten years, 1853—1863,	36.5	36.7	73.2
Average corrected to increased population	00	00	78.7
Death of persons above 90	0	1	1

The following communications have been received:—Case of Uterine Hæmorrhage; Labor attended with Arm Presentation; Advisory Boards for Insane Asylums; Operations in the Department of Ophthalmic Surgery in the Boston City Hospital.

Books Received.—A Memorial of John C. Dalton, M.D. An Address delivered before the Middlesex North District Medical Society, April 24, 1864. By John O. Green, M.D., of Lowell. Cambridge: University Press. 1864.

Married,—At Philadelphia, 25th inst., Dr. Charles H. Alden, U.S.A., to Miss Kate Russell, daughter of E. Lincoln, Esq.

Deaths in Boston for the week ending Saturday noon, Oct. 29th, 85. Males, 49—Females, 36.—Accident, 5—apoplexy, 2—congestion of the brain, 1—disease of the brain, 4—inflammation of the brain, 1—cholera infantum, 3—consumption, 17—convulsions, 2—croup, 2—cyanosis, 1—debility, 1—dementia, 1—diarrhœa, 1—dropsy, 5—dropsy of the brain, 2—dysentery, 2—scarlet fever, 2—typhoid fever, 3—disease of the heart, 3—infantile disease, 3—disease of the kidneys, 1—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 4—old age, 2—paralysis, 1—peritonitis, 1—premature birth, 1—smallpox, 5—disease of the spine, 1—unknown, 5.

Under 5 years of age, 27—between 5 and 20 years, 9—between 20 and 40 years, 17—between 40 and 60 years, 17—above 60 years, 15. Born in the United States, 47—Ireland, 30—other places, 8.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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ADVISORY MEDICAL BOARDS FOR INSANE ASYLUMS.

[Communicated for the Boston Medical and Surgical Journal.]

In the number of this Journal for October 13th appeared a paper read before the Suffolk District Medical Society, and one of a series, concerning "The Medical Management of Insane Women," in which it is attempted to show the necessity and also the great utility of a Medical Board of Advisors to our Insane Asylums, for the benefit of the patients, the hospitals, the superintendents, the profession and the community.

The writer of that paper says, "his remarks are based upon extended observation, patient reflection," &c. It is quite possible if his observation could be a little further "*extended*" he would not only discover the uselessness of such a board, but the positive disadvantages of adding any more official boards to our already liberal allowance of disinterested guardians of the public charitable institutions for the insane. He is not aware, it seems, of the privilege granted superintendents by the trustees, and expressly and wisely directed sometimes by the by-laws of our hospitals, to call in consultation at any time such physician or surgeon as they may think proper for special cases. It would seem to be much more in accordance with an intelligent understanding of the whole subject, to allow the superintendent, who may be supposed to know what he needs, to choose his advisor from the whole range of his professional brethren, than to have him confined to a board appointed, as it might be, for personal or political reasons. In the latter case he is *compelled to take* such advice as the appointed board may be *able and willing* to give. If, as the writer allows, the advisory board visits patients only at the request of the superintendents (and no other course would be tolerated by any competent superintendent), it is not difficult to see where the real advantage would be secured.

The writer of this article is familiar with the duties required of physicians in insane asylums, having acted both as assistant and superintendent in one of the most important of our New England hospitals; and while so employed he had occasion to call consultations occasionally, and he can cheerfully testify of the aid and comfort so received. But in no instance did he feel the need of any *permanent* board of advisors, *such as is recommended.*

It is said above that the advisory board might be appointed for political reasons. It might not. But by what influence was the late board of "Commissioners in Insanity" selected? For what reason were all the well-known "experts," able men and true, omitted from that Board? Without any wish to intimate that said Board was deficient, either in talent, experience or accomplishment for the task required, it is sufficient to say that of the three constituting that Board, two only were physicians, that neither of these was ever heard of as an "expert" in insanity, or as being inside the walls of an insane asylum in any other capacity than as an accidental or curious visitor, before his appointment to examine and report upon the difficult and complicated subject of insanity.

But let us examine some of the points taken by the author of the paper referred to. 1st. The advantage of an advisory board to the patients.

He has not made it very clear how the *mere appointment* of an advisory physician presents any advantage over the existing arrangement, when he admits that said advisor shall be called upon only at the discretion of the superintendent. The difference would consist merely in the person thought fit by the Governor, or whoever had the power of appointment, to give advice, and the person thought by the superintendent, a medical man and capable of judging of all the circumstances as they may arise, most suitable to aid him in any particular case.

If patients are not treated "*secundum peritissimam artem*" in any hospital at the present day, that hospital is under the care of an incompetent medical superintendent, and the fault is in the man, and not in the want of a board of advisors who, if appointed, could not act unless *called upon.* And the testimony of the quotation from the letter of one superintendent, saying "he could not make such an examination as was necessary for a full understanding of the case," &c., is "conclusive" only of the lack of a *disposition* on his part to *make use* of all the means of treatment considered proper to aid in restoring his patient.

In regard to the risks to which superintendents are liable from the delusions of insane patients, an advisory board would not relieve them except to give a wider field for the speculator. The danger is just as great every day, and when nothing out of the usual order of practice is said or done, if *delusions* are sufficient to annoy or victimize the managers of insane asylums.

Of the advantages of an advisory board to the profession.

The establishment of advisory boards *would*, undoubtedly, "stimulate physicians to more frequent study of mental disease," and it would afford a larger number from which to select gentlemen for superintendents and trustees. So far there would be an apparent advantage. But if the holding of such an office should lead them to suppose themselves qualified thereby to take the charge of one of our hospitals containing three or four hundred unsound minds, the *disadvantage*, after a very short time, would be *very* apparent.

As an example of the feeling that might be engendered by holding such an office, let us quote a few lines from the paper *under treatment*:—

"As a single instance of what would naturally and generally be the result, it may be mentioned that shortly after the report of the late Massachusetts Commission in Insanity had been rendered, it was urged upon two of the three gentlemen constituting that Board, that they should allow their own names to be used as eligible to the vacant superintendency of the Northampton Asylum. Upon the third of their number similar arguments would have been used had he been a physician."

If either of the gentlemen *so urged* supposed for a moment that by yielding to the advice of his partial but imprudent friends he would have secured the countenance and support of a single member of the intelligent Board who had the power of appointment, he is certainly under a great delusion.

This opinion is based upon *extended observation*, and given for the benefit of any who may hereafter entertain similar sentiments, holding office bringing them slightly in relation to the subject of insanity. *

LABOR, WITH ARM PRESENTATION, FOLLOWED BY DEATH.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—The case of "Difficult Labor" reported in the last number of your Journal, by Dr. S. Sargent, of Lawrence, is very similar in many of its features and its result to one which occurred in my own practice several years ago, and which I write out wholly from remembrance for your use. Its corresponding features will give it interest, though it may not aid much in elucidating Dr. Sargent's case.

Dec. 6th, 1860.—Mrs. W. was seized early in the day with labor pains. Not much progress was apparent till evening, when an arm protruded. After some ineffectual efforts to return the arm and deliver by turning, and anticipating trouble, owing to the excessive rigidity, and also influenced by some former painful experience, I had the late Dr. B. Cutter, of Woburn, sent for without delay to my aid. On his arrival, I administered ether to insensibility, and requested him to effect the delivery. The rigidity was still extreme and the expulsive efforts severe, and he found much difficulty in effecting the turning and in bringing down the legs. He at length succeeded in delivering a stillborn child. The flooding meanwhile was large. The placenta came readily away, but she did not rally. Measures were used without success to stimulate and to promote respiration. She became considerably conscious, spoke feebly a few times, and died, but a short time after delivery and while we were both present.

Fearing internal difficulty as the fatal cause--rupture of the uterus, or hæmorrhage, or both—I the next day made an autopsy, and found the uterus entire and well contracted and no hæmorrhage whatever. My own conviction was that she had died from exhaustion caused by inordinate flooding and the severe manipulation to which she had been subjected. My friend Dr. Cutter was inclined to the opinion that her death had been caused by the *ether*. I could not concur, as the symptoms preceding did not seem to justify the belief. While she roused to consciousness, she continued to sink physically.

Many years ago, before the discovery of the anæsthetic qualities of ether, I witnessed the death of a woman in the hands of another physician, from ruptured uterus, caused by turning. In the absence of a *post-mortem* examination, we are left more in the dark as to the cause of death in Dr. Sargent's patient, but must presume, I think, it was internal hæmorrhage, and, probably, ruptured uterus.

Winchester, Oct. 29th, 1864. A. C.

HISTORIES OF TWO SURGICAL SPECIMENS IN THE ARMY MEDICAL MUSEUM, WASHINGTON, D. C.

[Communicated, by permission of the Curator, Surgeon J. H. Brinton, U.S.A., for the Boston Medical and Surgical Journal, by Burt G. Wilder, Asst. Surg. 55th Mass. Vols.]

Case I.—Gun-shot wound of heart. Death. Specimen No. 2,639, Army Medical Museum. (Ventricular portion of heart, and conical pistol-ball.)

1st Lieut. Dennis H. Jones, 55th Mass. Vols., was wounded at Yellow Bluff, Fla., March 23d, 1864, at 5, P.M., by the accidental discharge of a Smith and Wesson revolver. The ball was conical, of the calibre of thirty-two one-hundredths of an inch. It entered the left breast between the 4th and 5th ribs. There was no wound of exit. Lieut. J. instantly fell backward, only exclaiming "Save me, save me" (from a supposed enemy, I thought). His face expressed mental anxiety rather than bodily pain.

His hands convulsively grasped a rope, but only for a moment, and, with one gurgling respiration, both heart and lungs appeared to cease to act within half a minute. A sort of groan, when the body was raised a few minutes afterwards, may be attributed rather to the sudden displacement of the large quantity of fluid in the cavities than to any conscious voluntary action.

Sectio Cadaveris, at 8, P.M. *Rigor mortis* slight. Surface of the body very pale and quite cool. The single external wound was very small, and was situated two inches below and a little inward from the left nipple. There had been no external hæmorrhage whatever, but on opening the thorax more than three quarts of blood were found in its cavity and that of the pericardium, the lung being compressed against the anterior parietes.

From its entrance, the ball had passed almost directly backward, inclining towards the middle line, perforating the heart near its apex so as to leave two openings in both the pericardium and left ventricle, and had buried itself, base foremost, in the body of the 10th dorsal vertebra, but without entering the spinal canal.

Of the two wounds in the walls of the left ventricle, that of entrance is one inch above the apex of the organ, and close to the inter-ventricular septum; that of exit is one and three quarters inches above the apex and three eighths of an inch from the septum. The former is small, and one fourth of an inch in diameter throughout; the latter is one fourth of an inch in diameter at its inner extremity, but greatly increases in size from within outward, so as to be of a conical shape, with the outer edges somewhat torn. The *columnæ carneæ* on the septum are just grazed in one spot, whence it may be inferred that the ventricle was dilated when struck by the ball. The contrast between the two wounds suggests the idea that the inversion of the ball may have been caused by the sudden contraction of the walls of the ventricle at the instant of perforation. On the base of the ball are two slightly converging grooves, apparently made by contact with the bone.

Case II.—Simple fracture of cervical vertebræ. Compression of spinal cord. Death. Specimen No. 3,159, Army Medical Museum. (Cervical portion of spinal cord.)

John A. Tice, private, Co. I, 1st New York Engineers, aged 18 years. The patient was very robust and strong. While bathing at Folly Island, South Carolina, July 27th, 1864, he ran and dove from a beach into two feet of water, striking the hard sandy bottom with the top of his head. There was immediate loss of sensation and of motion below the shoulders, and in the upper extremities, except over and in the flexor muscles of the forearm *(biceps* and *brachialis anticus)*, and, apparently, in the *deltoid*, though the extension of the arm was feeble and undeterminate. Consciousness was unimpaired. Respiration diaphragmatic. Circulation but little accelerated. Some, though not excessive, pain in the lower cervical region.

During the night he was restless and wakeful, and pulv. Doveri, gr. v., was given him.

18th hour.—Fever and some delirium. Magnesiæ sulphatis, ℥ i., a cathartic enema, and wet cups along the spine, No. xii., were prescribed. The symptoms abated after a copious alvine discharge. There was some flatus, with incontinence of fæces, but not of urine; the catheter was used three times a day. Applications of ice were made to the head, and of mustard to the feet and thighs.

54th to 60th hour.—High fever and more delirium. Treatment continued.

He now became more quiet and easy, but asphyxia commenced and steadily increased until death, at the sixty-eighth hour. During the last eight hours he took cough mixture and spir. frumenti, aa ℥ i., *pro re natâ.* To the last moment there was inability to cough or forcibly expectorate. Power of speech failed about six hours before death, but he could understand when spoken to for four hours longer.

Sectio cadaveris, July 30th, 3, P.M., two hours after death. Body of 6th cervical vertebra found vertically fractured, the posterior edges of the partially separated halves pressing upon the anterior surface of the cord, opposite the origin of the 7th and 8th cervical nerves. The arch of the 6th vertebra was broken down, and there was dislocation of the spinous processes of the 4th, 5th and 6th, with sufficient fracture of their arches to injure the cord, including most of the roots of the 6th cervical nerve, but not those of the 5th nerve.

At the point of direct injury the cord was softened, inflamed and disorganized, so as to escape as a red pulp from an incision in the pia mater. The disorganization had also extended upward along the grey commissure, and the anterior horns of grey matter above the roots of the 4th cervical, but not apparently along the posterior horns.

The roots of the 5th cervical nerve, the upper one of the brachial plexus, being originally unhurt, motion and sensation remained to those parts supplied by the musculo-cutaneous nerve, the fibres of which appear to constitute the upper one of the outer cord of the plexus, so that the flexors of the forearm, which are supplied by this nerve, could act, and the long head of the biceps could also feebly extend the arm at the shoulder till ten or twelve hours before death. The origin of the phrenic nerve (from the 3d and 4th cervical) being untouched by the original injury, the diaphragm could continue its function of abdominal respiration till the inflammation invaded its roots, after which asphyxia became prominent and caused death in six hours.

DR. GAILLARD'S PRIZE ESSAY ON OZONE; ITS RELATIONS TO HEALTH AND DISEASE.

[Concluded from page 276.]

WE have thus concluded the hygienic and therapeutic relations of ozone. We have shown that it is a deodorizer, a disinfectant; a diuretic, diaphoretic, stimulant, antispasmodic, astringent and hæmostatic—a combination certainly rare and valuable, belonging to no other article that we can use, and demonstrating that any agent, thus presented to us, is worthy of the closest study and most general investigation. We will briefly consider the relations of ozone to physiology, before bringing our essay to a conclusion.

We find that an aqueous solution of ozone has the most striking effect upon organic substances. Dr. Richardson states, " that blood freed from fibrin absorbs oxygen from the peroxide, and if it is venous blood it becomes arterial, with a rise in temperature. Washed fibrin and cellular tissue, in the fresh state, evolve the oxygen; albumen, urea, gelatin, fibrous membrane and skin produce no change. Grape sugar, and indeed all the sugars, brought into contact with it, become decomposed and evolve carbonic acid. Starch undergoes the same modification. These observations refer to animal substances recently used, but when putrefaction has commenced, then the oxygen seems to act on all alike and to produce rapid disintegration. An interesting fact, relating to the peroxide, is that its oxidizing power is easily prevented by the presence of certain bodies, having a wide extension of names but analogous characters. Ammonia, or vapor in solution, tobacco, hydrocyanic acid, solution of aconite, and, in short, all narcotics that are miscible with water, possess this neutralizing property; the permanency of the result being decided by the character of the agent employed. This establishes the great law, advanced by Snow, *that narcotism is suspended oxidation*, and that every substance, which on being introduced into animals produces narcotization, has the property of preventing the union of oxygen with other substances with which it is in contact and for which it has an affinity. A weak solution of ozone oxidizes the blood, but this action can be stopped by the action of alkaloids and narcotics. Injected into the left side of the heart of an animal, it restores the irritability, but appears to have an opposite effect on the right side. Injected into the arteries, immediately after death, it seems to restore to the muscles the power of contraction, on the application of an irritant. It suspends to a considerable extent cadaveric rigidity, and it reduces the spasmodic action excited by such bodies as ammonia and hydrocyanic acid."

Dr. Richardson deserves the thanks of the profession for his interesting and valuable experiments in regard to the varied properties belonging to the aqueous solution of ozone. With a supply of pure peroxide of barium, any physician can manufacture his aqueous solution of ozone, and administer it, with as little difficulty as attends the solution of quinine, morphine, or any similar articles of the Dispensatory. Messrs. Bullock & Reynols, Pharmaceutists, of London, are now preparing the peroxide of barium for general use, and with this we can make every hygienic or therapeutic application of ozone that may be desired. After for many years measuring the amount of atmospheric ozone with the ozonoscope, examining its effects and testing its properties, *we are at last enabled to offer an artificial preparation of this agent, for general use, to the profession.* We have a perfect ozonoscope; we can certainly now prepare perfect and uniform ozonometers; *and we have finally an efficient and always accessible preparation of the agent itself.* The field is all ready; the instruments all prepared; we ask, now, but that willing laborers shall come and contribute to the harvest. With a prepared and fruitful field, with perfect instruments for its tillage, competent workmen have only to unite to secure a harvest that shall be an ample reward for past and future labors.

Ozone has received the most enthusiastic attention from the savans of Europe; the list of observers is a long one, and exhibits some of the most familiar and distinguished names known to science. We find, in this catalogue, the names of Williamson, Marignac, De La Rive, Faraday; Schönbein, at Bâle; Wolf, at Berne; Simonin Sr. and Simonin Jr., at Nancy; Boeckel Sr. and Boeckel Jr., at Strasburg; Billiard, at Carligny; Robert, at Neudorff; Berigny and Silbermann, at Paris; Seitz, Slechner, Schnepf, Abt, Eschach and Knolz, at Vienna; Pourian, at Saulsaic; Decharmes, at Amiens; Grellois, at Constantinople; and very many others. The subject is studied at Athens and at Algiers; throughout France, England, Germany, Italy, Austria and the larger countries of the Eastern Continent. Results and tables are published at Paris, Munich, Strasburg, Berlin, Vienna, and wherever science is admired and appreciated in the olden country.

But what shall we say of America? What can we say? Near Montreal, Canada East, Smallwood quietly but industriously pursues his labors. Capt. Pope, U. S. Army, has made many and most valuable observations. With two, or perhaps three other names, the American list is ended. The Smithsonian Institute is, we believe, about to generally investigate the subject, but has so far almost entirely neglected it. Extensive in its ramifications, meritorious and efficient in all that it undertakes, it is to be hoped that this Institution will soon enter the field. "The wise men of the East" have done their duty; those of the West are lamentably recreant. In America, this subject is almost ignored, if not unnoticed; it forms the exception to the interest, study and investigation usually here bestowed upon subjects of scientific and practical import. Usually every new light which appears in the horizon of any science, if not increased here, is at least faithfully reflected. Why is it that this subject, so interesting, so important, so generally investigated by all who worship in the temple of science and stand about its portals, is here so generally neglected? Why is it that the American profession, characterized by its enthusiasm in the study and elucidation of scientific subjects, almost so universally ignores this agent; an agent so conspicuously active and efficient in the fields of pathology, therapeutics and hygiene? Why refuse to be co-laborers with those distinguished philosophers of the olden world, who leave acts as epitaphs and works for monuments?

Where the nature and properties of an agent are to be farther elucidated, by a long-continued and diversified series of atmospheric tests, it is at least reasonable to expect that the American profession could render the most valuable aid. Scattered, as are its representatives, over the greater part of an entire continent, they can always contribute much that is interesting, and beyond doubt much that is important and original. The subject is no longer a chemical one in its characteristics, relations and attributes, but one of the most simple and practical character. To a nation whose distinguishing peculiarity is a study and culture of the practical, this subject, at last, offers every such attraction. Its habitat is the atmosphere, and who should more appropriately seek and examine it than those whose country represents the type of almost every zone, the illustration of each particular climate.

We have completed our subject.

We present these pages (if deemed worthy of presentation) to the profession, with the desire and hope that its representatives will see the importance and value of the interesting agent which forms their subject; that, by their united action, it may derive its chief elucidation as happily from the Western, as it did its birth from the Eastern Continent. Let it be everywhere represented in the armory of the profession; a profession which, Samaritan-like, is ever administering to the afflicted wayfarer, whenever found upon the roadside of Life.

AUTHORITIES UPON THE SUBJECT OF OZONE.

Memorada of Society of Natural History, at Bâle. Journal of Practical Chemistry. Annals of Poggendorff. Archives of Electricity. Annals of Liebig. Silliman's Journal. Braithwaite's Retrospect. Ranking's Abstract. Scientific Annuals. London Lancet Files. L'Oxygéne Electrisé, par H. Scoutetten. European and American Medical and Scientific Journals. Writings of Graham. Monographs, Researches, Letters and Tables of Schönbein, Boeckel Sr., Boeckel Jr., Williamson, Faraday, Richardson, Marignac, De la Rive, Frémy, Becquerel, Simonin Sr., Simonin Jr., Osann, Millon, Reiset, Baumertz, Marchant, Berzelius, Langlois, Seitz, Abt, Decharmes, Pourian, Grellois, Griffin, Boussingault, Bérigny, Wolf, Braconnot, Pelouze, Van Marum, Eschach, Knolz, Billiard, Slechner, Robert, Silbermann, Schnepf, Dutrochet, Shübler, Liebig, Fraas, Bergmann, Heller, Banal, Smallwood, Pope, Gregory, and many others. The names given represent those who have prominently identified themselves with this subject.

April 15*th*, 1861.

PROFESSOR HELMHOLTZ ON THE NORMAL MOTIONS OF THE HUMAN EYE.

(Concluded from page 285.)

THIS explanation relates only to Monocular vision; we have to inquire also how it influences Binocular vision.

Each eye has its field of vision, on which the visible objects appear distributed like the objects of a picture, and the two fields with their images seem to be superimposed. Those points of both fields of view which appear to be superimposed are called *corresponding* (or *identical)* points. If we look at real objects, the accurate perception of the superimposition of two different optical images is hindered by the perception of the stereoscopic form and depth; and we unite indeed, as Mr. Wheatstone has shown, two retinal images completely into the perception of one single body, without being able to perceive the duplicity of the images, even if there are very sensible differences of their form and dimensions. To avoid this, and to find those points of both fields of view which correspond with each other, it is necessary to use figures which cannot easily be united into one stereoscopic projection.

Two figures may be constructed, the right of which is drawn with white lines on black ground, the left with black lines on a white ground. The horizontal lines of both figures are parts of the same straight lines; the vertical lines are not perfectly vertical. The upper end of those of the right figure is inclined to the right, that of the left figure to the left, by about 1¼ degree.

Now I beg you to look alternately with the right and with the left eye at these figures. You will find that the angles of the right figure appear to the right eye equal to right angles, and those of the left figure so appear to the left eye; but the angles of the left figure appear to the right eye to deviate much from a right angle, as also do those of the right figure to the left eye.

When you draw on paper a horizontal line, and another line crossing it exactly at right angles, the right superior angle will appear to your right eye too great, to your left eye too small; the other angles show corresponding deviations. To have an apparently right angle, you must make the vertical line incline by an angle of about 1¼ degree for it to appear really vertical; and we must distinguish, therefore, the *really vertical* lines and the *apparently* vertical lines in our field of view.

There are several other illusions of the same kind, which I omit because they alter the images of both eyes in the same manner and have no influence upon binocular vision; for example, vertical lines appear always of greater length than horizontal lines having really the same length.

Now combine the two sides of the figure into a stereoscopic combination, either by squinting, or with the help of a stereoscope, and you will see that the white lines of the one coincide exactly with the black lines of the other, as soon as the centres of both the figures coincide, although the vertical lines of the two figures are not parallel to each other.

Therefore not the *really vertical* meridians of both fields of view correspond, as has been supposed hitherto, but the *apparently* vertical meridians. On the contrary, the horizontal meridians really correspond, at least for normal eyes which are not fatigued. After having kept the eyes a long time looking down at a near object, as in reading or writing, I found sometimes that the horizontal lines of the figure crossed each other; but they became parallel again when I had looked for some time at distant objects.

In order to define the position of the corresponding points in both fields of vision, let us suppose the observer looking to the centres of the two sides of the figure, and uniting both pictures stereoscopically. Then planes may be laid through the horizontal and vertical lines of each picture and the centre of the corresponding eye. The planes laid through the different horizontal lines will include angles between them, which we may call *angles of altitude;* and we may consider as their zero the plane going through the fixed point and the horizontal meridian. The planes going through the vertical lines include other angles, which may be called *angles of longitude,* their zero coinciding also with the fixed point and with the *apparently vertical* meridian. Then the stereoscopic combination of those diagrams shows that *those points correspond which have the same angles of altitude and the same angles of longitude;* and we can use this result of the experiment as a definition of corresponding points.

We are accustomed to call *Horopter* the aggregate of all those points of the space which are projected on corresponding points of the retinæ. After having settled how to define the position of corresponding points, the question, what is the form and situation of the Horopter, is only a geometrical question. With reference to the results I had obtained in regard to the positions of the eye belonging to different directions of the visual lines, I have calculated the form of the Horopter, and found that generally the Horopter is a line of double curvature produced by the intersection of two hyperboloids, and that in some exceptional cases this line of double curvature can be changed into a combination of two plane curves.

That is to say, when the point of convergence is situated in the middle plane of the head, the Horopter is composed of a straight line drawn through the point of convergence, and of a conic section going through the centre of both eyes and intersecting the straight line.

When the point of convergence is situated in the plane which contains the primary directions of both the visual lines, the Horopter is a circle going through that point and through the centres of both eyes and a straight line intersecting the circle.

When the point of convergence is situated as well in the middle plane of the head as in the plane of the primary directions of the visual lines, the Horopter is composed of the circle I have just described, and a straight line going through that point.

There is only one case in which the Horopter is really plane, as it was supposed to be in every instance by Aguilonius, the inventor of that name—namely, when the point of convergence is situated in the middle plane of the head and at an infinite distance. Then the Horopter is a plane parallel to the visual lines, and situated beneath them, at a certain distance which depends upon the angle between the *really* and *apparently* vertical meridians, and which is nearly as great as the distance of the feet of the observer from his eyes when he is standing. Therefore, when we look straight forward to a point of the horizon, the Horopter is a horizontal plane going through our feet—it is the ground upon which we are standing.

Formerly physiologists believed that the Horopter was an infinitely distant plane when we looked to an infinitely distant point. The difference of our present conclusion is consequent upon the difference between the position of the *really* and *apparently* vertical meridians, which they did not know.

When we look, not to an infinitely distant horizon, but to any point of the ground upon which we stand which is equally distant from both our eyes, the Horopter is not a plane; but the straight line which is one of its parts coincides completely with the horizontal plane upon which we are standing.

The form and situation of the Horopter is of great practical importance for the accuracy of our visual perceptions, as I have found.

Take a straight wire—a knitting-needle for instance—and bend it a little in its middle, so that its two halves form an angle of about four degrees. Hold this wire with outstretched arm in a nearly perpendicular position before you, so that both its halves are situated in the middle plane of your head, and the wire appears to both your eyes nearly as a straight line. In this position of the wire you can distinguish whether the angle of the wire is turned towards your face or away from it, by binocular vision only, as in stereoscopic diagrams; and you will find that there is one direction of the wire in which it coincides with the straight line of the Horopter, where the inflexion of the wire is more evident than in other positions. You can test if the wire really coincides with the Horopter, when you look at a point a little more or a little less distant than the wire. Then the wire appears in double images, which are parallel when it is situated in the Horopter line, and are not when the point is not so situated.

Stick three long straight pins into two little wooden boards which can slide one along the other; two pins may be fastened in one of the boards, the third pin in the second. Bring the boards into such a position that the pins are all perpendicular and parallel to each other, and situated nearly in the same plane. Hold them before your eyes and look at them, and strive to recognize if they are really in the same plane, or if their series is bent towards you or from you. You will find that you distinguish this by binocular vision with the greatest degree of certainty and accuracy (and indeed with an astonishing degree of accuracy) when the line of the three pins coincides with the direction of the circle which is a part of the Horopter.

From these observations it follows that the forms and the distances of those objects which are situated in, or very nearly in, the Horopter, are perceived with a greater degree of accuracy than the same forms and distances would be when not situated in the Horopter. If we apply this result to those cases in which the ground whereon we stand is the plane of the Horopter, it follows that, looking straight forward to the horizon, we can distinguish the inequalities and distances of the different parts of the ground better than other objects of the same kind and distance.

This is actually true. We can observe it very conspicuously when we look to a plain and open country with very distant hills, at first in the natural position, and afterwards with the head inclined or inverted, looking under the arm or between our legs, as painters sometimes do in order to distinguish the colors of the landscape better. Comparing the aspect of the different parts of the ground, you will find that we perceive very well that they are level and stretched out into a great distance in the natural position of your head, but that they seem to ascend to the horizon and to be much shorter and narrower when we look at them with the head inverted: we get the same appearance also when our head remains in its natural position, and we look to the distant objects through two rectangular prisms, the hypothenuses of which are fastened on a horizontal piece of wood, and which show inverted images of the objects. But when we invert our head, and invert at the same time also the landscape by the prisms, we have again the natural view and the accurate perception of distances as in the natural position of our head, because then the apparent situation of the ground is again the plane of the Horopter of our eyes.

The alteration of color in the distant parts of a landscape when viewed with inverted head, or in an inverted optical image, can be explained, I think, by the defective perception of distance. The alterations of the color of really distant objects produced by the opacity of the air, are well known to us, and appear as a natural sign of distance; but if the same alterations are found on objects apparently less distant, the alteration of color appears unusual, and is more easily conceived.

It is evident that this very accurate perception of the form and the distances of the ground, even when viewed indirectly, is a great advantage, because by means of this arrangement of our eyes we are able to look at distant objects, without turning our eyes to the ground, when we walk.

All the lunatic asylums in Canada are represented as overcrowded. A new private one has lately been established, on the St. Foy Road, near Quebec, by Mr. Wakeman, formerly and for many years of the Beauport Asylum.

Bibliographical Notices.

The Nervous and Vascular Connection between the Mother and Fœtus in Utero. By JOHN O'REILLY, M.D., F.R.C.S.I. Revised and Enlarged. *Γύωθι σεαυτον.* New York: printed by Robert Craighead. 8vo. Pp. 86. 1864.

WE scarcely know how to begin a critical review of this pamphlet, the back cover of which is filled with so many flattering notices and recommendations of it. If we were to begin where criticism first suggests itself, we would allude to the expression in the title-page of "the Mother and Fœtus in Utero," and remark that we never knew of their being there at the same time. We should next ask the appositeness of the motto. To which does it apply—to the mother or to the fœtus? We happen just now to be neither. When we were the one we could not have read the pamphlet had it been written, and owing to our sex we cannot ever expect to be the other. The opening sentence in the introduction is very gratifying. "The ennobling profession of surgery is rapidly rising to the highest pinnacle of perfection and usefulness."

The next that follows is worthy, too, to know. "Medicine is brilliantly advancing in the sciences of diagnosis, prognosis and pathology, but is yet in its infancy in point of knowledge with respect to the etiology of diseases," &c. &c. And then the object of the book is stated. "In the following pages I have attempted to throw light on many recondite, abstruse and hitherto unexplored matters."

The work itself commences with the question, "Is there a nervous connection between the mother and fœtus *in utero?*" (meaning, of course, "between the mother, and *the* fœtus in utero.") To answer this question the author has collected a great number of facts, and discusses the assertions of others, but we have to confess we do not always see the application of his facts or the appositeness of his discussions, either as to matter or manner. He asserts that the connection is by means of nerves of the ganglionic system passing along or in the coats of the arteries. In arguing for the truth of this assertion, he brings forward facts which *he thinks* can only be explained by such a theory—to us a very unsatisfactory way of handling the question. His analogies, too, are by no means unimpeachable. For instance, he reasons that as an impression upon the toe is transmitted to the brain by nerves, so an impression upon the mother must be transmitted to the fœtus by nerves; and in expatiating upon this point we have some ten pages upon the nervous system in general—its anatomy, histology and physiology, which might just as well be anywhere else. They do not exhaust the subject either in statement or argument, and for all useful purposes just here the deductions of the author might have been given, leaving the reader to accept them or not, according to his own knowledge and reason. One of the facts cited in proof of the nervous connection between the mother and fœtus is in the quotation from St. Luke, "As soon as the voice of thy salutation *sounded* in *my* ears, the infant in my womb leaped for joy"; but fearing that there are some persons who do not believe in the Gospel, several cases are cited from the author's own practice and from that of others to show that impressions upon the mother are felt by the fœtus—a fact that we cannot conceive any physician should deny. We cannot continue to examine this book in detail. We find in it Genesis and geology quoted to show that "The regulation of the laws of life, the preservation and propagation of life, devolve on the organic nervous system." Then we have two more pages of note, in small print, that take a general review of a good many things and state a good many facts which we had long known, though we should not have expected to have found them here. On the next page a very common but important error is corrected. "Instead of saying there are no organic nerves in the arteries of the brain, he must rather say the arteries are altogether composed of the organic nervous matter, what is called and constitutes *nervi molles*." (P. 24.) Then we are told "No man living could point out in a section of the placenta the various vessels which enter into its structure." Evidently some of our friends have tried this too soon. They ought to have waited until they were "down among the dead men." A little further on we have a fair specimen of the author's method of induction. "The liver purifies the blood, the placenta purifies the blood—the functions of the liver and [of the] placenta are, therefore, analogous. The number of vessels in each organ being the same, and the anatomical organization of the liver being settled, it follows, as a consequence, that the same anatomical description must be applicable to the placenta." *Ex pede Herculem.*

Part Second has a good deal of chemistry in it, besides other things. The Appendix contains a large number of cases illustrating the influence of the mother while pregnant upon her offspring—one showing how a negro and mulattress can get a white child, provided the woman is sufficiently impressed with the *idea* of a white man. There are also several interesting wood-cuts—a man born with the head of an elephant, a horse with a girl's head, &c.

The author has certainly gone over a large field, and wandered very incontinently into several other large fields. He has picked up many interesting facts and indulged in many fanciful imaginations—has read much and quotes much, but we cannot feel he has logically answered the question he commenced with, or sensibly enlarged the knowledge his motto specifies. W. E. C.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 10, 1864.

The Introductory at the Massachusetts Medical College.—We have all, old and young, once been students, and can recall the pleasure with which, in those days, we looked forward to the opening lecture of the winter course. Fresh from the quietness of country homes or the private instruction which the city afforded, and filled with an ardor for learning and the firmest resolutions of industry, against which, alas! the stern reality of four months of hard, pine benches proved too strong, we came together upon this occasion, eager to renew old acquaintanceship and curious to study the new faces of those who were to be our fellow-students during the semester. To many it was the first opportunity of visiting the halls where degrees were won or of seeing a professor, and to all of us, we think, the words then spoken conveyed a more lasting impression than any which followed. For ourselves we still like to attend these yearly openings, to see the gathering of the young men who are to succeed us, and to be reminded, by the words we hear, of how much there is still to be learned in our art before we cease to be students.

The introductory lecture of the present season, which was given at the College last week by Prof. Clarke, was specially adapted to make us feel not only the necessity, but almost the hopelessness, of making ourselves acquainted by study with the advance of science since our student days. It was a clear and forcible exposition of the progress which has been made in our knowledge of materia medica during the present century. The improvements which have been introduced into pharmacy by the aid of chemistry, the minute analysis of the physiological action of drugs, and the enlarged scope which is now given to therapeutical agents, were all considered and strongly contrasted with the customs and ignorance of comparatively recent days.

The opinion may be entertained outside our immediate vicinity and among those who have no better means of judging than what they have heard or read, that a general scepticism in therapeutics prevails among the profession in Boston. It at least would not be surprising if such a belief did exist, but we can assure our readers there is no real foundation for such an opinion. Something, indeed, has been written and said by individual physicians, but the number of these may be counted upon the fingers of half a hand, and their words when analyzed, like those of a Van Winkle, are adapted only to an audience and a science of some fifty years ago. To such sweeping notions there can be no better answer than the daily practice of every intelligent and educated physician among us; for eyes and understanding are given to one as well as to another. There can certainly be no doubt as to the entire orthodoxy of the doctrines taught in the School by the Professor of Materia Medica, or of the popularity of his instruction with the students; and his excellent address, which we shall publish in our next number, may be accepted by our readers as an able exposition of the unchanging importance of rational therapeutics in the treatment of disease, and a fair representation of the views entertained by the profession of New England.

On the Inhalation of Oxygen Gas. — Dr. Richardson, M.A., M.D., read a communication on the "Inhalation of Oxygen." The paper was supplementary to one which he had laid before the section at the meeting of the Association held at Oxford. The author said his experiments on the inhalation of oxygen had led him to an almost precise knowledge of the condition under which oxygen would most freely combine with blood. It had been stated in almost every modern work on physiology, that oxygen inhaled in the pure form, is a narcotic poison. These statements are based on the researches of Mr. Braighton, in which the late Sir Benjamin Brodie took part. The observations of Mr. Braighton, in so far as the recital of the phenomena observed by him were concerned, were strictly correct, but the inferences that had been drawn from him were nearly altogether incorrect, and were, at the best, so narrow, as to be comparatively valueless. In fact, Mr. Braighton had seen but one form of oxygen inhalation. The author next stated that the influence of oxygen in inhalation was modified—1. By dilution of the oxygen. 2. By dilution of the blood. 3. By the activity of the oxygen. 4. By the presence or absence in the blood of bodies which stop combination. On the point of dilution of oxygen, Dr. Richardson stated that a certain measure of dilution was required, not because the body consumed too quickly in pure oxygen, but because neutral oxygen would not combine with the carbon of the blood unless it were diluted. In atmospheric air, the dilution is just sufficient to do no more than alter combination, and the quantity of oxygen may be increased, with absorption at sixty degrees to sixty-five degrees, Fahr., if the oxygen is raised in amount to three parts of the gas, to two of nitrogen. Beyond this, the combining power is reduced, and oxygen is not absorbed. Hence animals die in the gas as it approaches the pure state; they die not by a narcotic process, but by a process of negation. On the point of dilution of the blood, the author said that blood possessing a specific gravity of 1053 seemed to have most steady power in absorbing oxygen, as it existed in common air; by increasing the quantity of water in the blood to a limited extent, say, until it lowered the blood to 1060, the absorption of oxygen is increased to a maximum, and after that it is diminished. Below 1055 degrees the absorption of oxygen steadily declines. In respect to the activity of the oxygen, the most different results are obtained, according to the activity. If the oxygen be made fresh from chlorate of potassa, it sustains life even in the pure form, and the activity of the functions are increased: if electric sparks are passed through the gas, or if the gas be heated to 100°, the same is the fact. On the other hand, if the gas is exposed to ammonia, to decomposing animal matter, or even to living animals, over and over again, it loses, even when diluted, its activity, and no longer combines with the blood. In reference to the last point, Dr. Richardson said that there were conditions of blood in which the power of absorption was limited. Alcohol, chloroform, opium, and certain alkaline products, formed in the blood in disease, prevented absorption of oxygen, and death not uncommonly took place from this cause. Great increase of water did the same. After this description, Dr. Richardson added that the question had often been put, whether the inhalation of oxygen could be usefully applied in the treatment of disease? Priestly, Beddoes, Hill, and many of those who lived when oxygen was first discovered, had formed the most sanguine expectations on this point; they saw before them an elixir, if not *the* elixir vitæ. Chaptal, in speaking of the effects of oxygen in consumption, said of it: it raises hope, but, alas! it merely spreads flowers to the tomb. Since then, various opinions of the extremest kind have been expressed; the differences have arisen from the entire want of order that has been followed in the inquiry. The one man has used pure oxygen, the other diluted. The one has given the gas to anæmic people, whose blood is surcharged with water; the other to diabetic or choleraic persons whose blood is of high specific gravity: the one has given it heated, the other at the temperature of the day. If even a stick of phosphorus was exposed to oxygen under such varying conditions, the phenomena obtained would be as variable as those that had been registered in physic regarding oxygen as a remedy. The difficulties of arriving at uniform results, had been almost insurmountable from another cause, that of obtaining oxygen in a practical form for inhalation. Fortunately, this difficulty has now been removed. The discovery by Mr. Robbins of a mode of evolving oxygen, by acting on peroxide of barium and bichromate of potassa with dilute sulphuric acid, had given him (Dr. Richardson) the opportunity of inventing a little apparatus for inhaling oxygen, which could be carried anywhere, and used at a moment's notice. The author here exhibited and described the apparatus. It consists of two glass globes, with a double-valved mouthpiece, connected with the escape tube of one globe. The powder containing the oxygen was placed in one globe, and dilute sulphuric acid was poured on it. The oxygen gas was evolved and passed over into the second globe, which was half filled with water. From this, after being washed, in passing through the water, the gas was inhaled. The apparatus was so arranged that any dilution of oxygen recommended—three parts of oxygen to two of nitrogen—could be secured ; and, by changing the water in the second globe, so as to have hot or temperate or very cold, the activity of the combination could be graduated. In conclusion, Dr. Richardson remarked that his object in bringing forward this short communication was to invite medical men to a method of research which promised much, and which now might be carried on with certainty of result and uniformity of experience.

Professor Wanklyn was prepared, as were many others, for the fact mentioned that it was a matter of little consequence whether much or little oxygen existed in a certain quantity of air—that the effect was deteriorated by its freshness—by the presence, in fact, of very minute quantities of, perhaps, ozone, or oxide of hydrogen. In operating with what seemed to be pure oxygen, they were operating with a gas containing large quantities of very active substances, and there was reason to believe that it was those substances, and not the oxygen, that produced the effects in breathing which were formerly attributed to oxygen. Take, for instance, a large room filled with people, close the doors and windows, and, as they knew, in half an hour's time the air would become much deteriorated. It was to be supposed that this deterioration was due to the abstraction of oxygen and the evolution of carbonic acid. It had now been ascertained, however, that this had nothing to do with the result, and, if they took a sample of air from the most crowded theatre, the relative proportions of the oxygen to carbonic acid would not be found to have altered more than one part in 1000 of the normal condition. To what, then, was the deterioration due? Carbonic acid, so far as they knew, was not so particularly active that one part in 1000 might determine whether the air was a little better or worse. No doubt human beings gave off minute quantities of extremely poisonous substances, which did deteriorate the air to such an extent as to remove every trace of oxygen from it. It was commonly supposed that in the Black Hole at Calcutta the loss of life arose from the want of oxygen ; but that was not the case, for at the time the air did not contain over 1 per cent. less oxygen, or more carbonic acid than under ordinary circumstances.

The President observed, that Sir Humphry Davy, in his early experiments, discovered that, by inhaling pure oxygen, there was no more change in the system than with the ordinary oxygen of the atmosphere, and more recent experiments had shown that the proportions of oxygen and carbonic acid were only capable of a certain extent of alteration. The important point appeared to be, not that there should be a certain proportion of oxygen, but that which existed should be fresh. We had made an analysis of the air in a printing office in the metropolis, both by day and by night, and we found that in the daytime there was more than double the amount of carbonic acid gas free than there was in the external air; and this proportion was again doubled at night. Some of these offices were crowded with persons night and day, and the consumption was from 300 to 400 feet per man, allowing for gas burners. There was good evidence to show that there were conditions in which a very large increase of carbonic acid existed in the air after respiration and combustion.

Dr. Richardson:—Of course in rooms such as those there might be a large accumulation of carbonic acid, and persons might be influenced by it, but the fact he wished to lay down was, that carbonic acid was not necessarily the cause of deterioration, and that oxygen itself by constant use might be brought to such a condition as not to sustain life. In one of his experiments an animal, placed in oxygen, after remaining for some time showed signs of a sinking condition, such as poor people living in badly ventilated houses exhibited, but upon charging the air in the vessel with electric sparks the animal recovered. These facts might be turned to account, and a wholesome atmosphere produced by using the preparation to which he had referred, or the bichromate of potassa, placed in open vessels and treated with sulphuric acid, producing ozonized oxygen. They might ventilate a room in the best possible manner, but if the supply of air passed over a bad neighborhood they might be only the worse for their precautionary measures. Then, again, the condition of the blood had a good deal to do with the absorption of oxygen. Pale persons, whose blood was exceedingly watery, did not absorb oxygen to the same extent as others, and thus fainting was produced.—*From Proceedings of British Association.*

PERMANGANATE OF POTASH IN GONORRHŒA. By JOHN G. RICH, M.D., Beachville, Canada West.—We find the following among the selected articles of the *Chicago Medical Journal:*—

For the last two years I have frequently employed the permanganate of potash as an injection in the treatment of gonorrhœa, and the constant success derived from its use has been extremely satisfactory. My usual method had previously been to administer, first, a hydragogue cathartic, then to give a mixture of cubebs, copaiva, nitre, &c., with injections of sulphate of zinc, tannic acid, &c. But since employing the permanganate my treatment has been much more circumscribed, for with this remedy alone I have frequently cured very bad cases in forty-eight hours, and this, too, without its being followed by any evil effect from the sudden arrest of the discharge. My usual mode of treatment, however, is as follows:—℞. Potassæ bitart., ℈i.; podophyllin, gr. i. M. In chartulas quatuor dividendus. S. One every two hours until free catharsis is produced. After which: ℞. Potassæ permangan., gr. vi.; aquæ fontan., ℥i. M. S. To be used as an injection three times a day. I direct at the same time the free employment of mucilaginous drinks, as althæa, ulmus, acacia, &c., and put the patient upon a non-stimulating regimen.

Out of sixty-four registered cases this course of treatment has failed in but two instances; and I find that recent attacks usually become arrested by it after from three to six injections. I have found it advisable to continue the demulcents for at least a week after the cessation of the discharge. In none of all these cases was the injection continued after the fourth day.

When accompanied by chordee, I usually employ the following:—℞. Lupulin, ℈iss.; pulv. camphoræ, ℈i.; micæ panis, q. s. M. Ft. mass in pilulas, xvi., dividenda. Two, three, or four on going to bed.

I think that the permanganate of potash is a remedy deserving of more notice than physicians have hitherto given it, and I hope that my experience may produce for it a more extended trial in cases of gonorrhœa.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, November 5th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	38	41	79
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.2	35.6	70.8
Average corrected to increased population - - - -	00	00	76.12
Death of persons above 90 - - - - - - - -	1	0	1

Books Received.—A System of Surgery; Pathological, Diagnostic, Therapeutic and Operative. By Samuel D. Gross, M.D., Professor of Surgery in the Jefferson Medical College of Philadelphia, &c. Illustrated by over thirteen hundred Engravings. Third Edition, much enlarged and carefully revised. In two Volumes. Philadelphia: Blanchard and Lea. 1864.—Diphtheria; its Nature and Treatment, with an account of the History of its prevalence in various Countries. By Daniel D. Slade, M.D. Being a Second and Revised Edition of an Essay to which was awarded the Fiske Fund Prize of 1860. Philadelphia: Blanchard and Lea. 1864.—The Army Surgeon's Manual, for the use of Medical Officers, Cadets, Chaplains, and Hospital Stewards; containing the Regulations of the Medical Department, all General Orders from the War Department, and Circulars from the Surgeon-General's Office, from Jan. 1st, 1861, to July 1st, 1864. By William Grace, of Washington, D. C. New York: Bailliere Brothers. 1864.—Collection de Mémoires sur une Fonction Méconnue du Pancréas la Digestion des Aliments Azotés. Par Lucien Corvisart, Médicin Ordinaire de l'Empereur, Officier de la Légion d'Honneur, Lauréat de la Faculté de Médecine et de l'Institut, &c. Paris: Victor Masson et Fils. 1857–1863.

Married,—At the residence of the bride's father, Oct. 27th, Dr. Daniel Mayer, of Pomeroy, Ohio, to Miss Addie Walker, of Brownstown, Va.—In Concord, Oct. 31, Dr. Robert W. Wood, of Honolulu, Hawaiian Islands, to Miss Lucy Jane Davis, of Concord.

Died,—In Providence, Oct. 29, Dr. Richard Brownell, in his 75th year. He was noted as a good man and skilful physician.—At New Orleans, 21st ult., at the U. S. Naval Hospital, of yellow fever, Ira W. Bragg, Asst. Surgeon U. S. Navy, formerly of Croydon, N. H., 28.

Deaths in Boston for the week ending Saturday noon, Nov. 5th, 79. Males, 38—Females, 41.—Accident, 3—aneurism, 1—apoplexy, 1—inflammation of the brain, 1—congestion of the brain, 1—disease of the brain, 2—bronchitis, 4—cancer, 2—cholera infantum, 3—consumption, 13—croup, 3—debility, 2—diarrhœa, 1—diphtheria, 3—dropsy, 1—dropsy of the brain, 2—dysentery, 3—erysipelas, 1—scarlet fever, 5—typhoid fever, 1—disease of the heart, 3—inflammation, 1—congestion of the lungs, 1—inflammation of the lungs, 2—marasmus, 2—old age, 3—paralysis, 2—peritonitis, 1—puerperal disease, 2—disease of the skin, 1—smallpox, 1—sore throat, 1—teething, 1—thrush, 1—unknown, 5.

Under 5 years of age, 27—between 5 and 20 years, 10—between 20 and 40 years, 14—between 40 and 60 years, 9—above 60 years, 19. Born in the United States, 53—Ireland, 18—other places, 8.

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RECENT PROGRESS IN MATERIA MEDICA.

An Introductory Lecture delivered at the Mass. Med. College, at the opening of the Winter Course of Instruction in Harvard University. By Edward H. Clarke, M.D., Professor of Materia Medica.

Gentlemen,—Nothing is more common than to write and talk of the intellectual activity of the present age, and of the supposed or real progress which attends it. Everywhere there are discussion, investigation and change. Nothing is so obscure as to escape observation, or so revered as to be above examination. There is no authority which is not questioned, no claim that is not challenged. The probe of the philosopher or sceptic is pushed fearlessly down to the marrow of all things, regardless of the dismay, or pain, or destruction which attends the operation. English Churchmen call in question the authority of the Bible, and the discussion spreads from the wilds of Cape Town to the cloistered gardens of Oxford; it disturbs the conservatism of the House of Lords and ruffles the equanimity of the Bishops. The third Napoleon reorganizes the map of the world. calls the Holy Alliance a fiction, and proclaims himself the incarnation of progress and order. The Autocrat of Russia abolishes serfdom and hints at constitutional liberty. In our own country, a civil war of unexampled magnitude, and pregnant with unknown results. marks the dying struggles of American slavery. And so, in the sciences and arts, the evidences and results of intellectual activity are not less surprising than in politics and religion. Steamboats and railroads, electric writing and sun-pictures, the microscope and etherization, are not unworthy attendants of the abolition of serfdom and slavery; of the enlightenment of the masses, and of the enfranchisement of thought. Even the quietest fields of study, the obscurest corners of science are moved by the currents and counter-currents that vex the whole ocean of ideas.

It would be strange indeed, if, in the midst of so much questioning and effort, the science of medicine should be the only one to remain unchanged, the art of medicine the only one to exhibit a sort of conservative apathy. And, in truth, medicine has *not* stood still. It would not be difficult to show that no science has exhibited greater activity during the last half century than that of medicine, or brought forth greater results in the arts that flow from it.

Perhaps that department of medical science which is supposed to have changed or progressed the least; to be the least susceptible of change; which is often regarded as the narrowest and most barren of all; which is alike the sceptic's jest and the charlatan's resource, is the one which I have the honor to teach in this place—Materia Medica. Its name has the hard and forbidding sound of the dead languages. It is supposed to deal with drugs alone, whose jaw-cracking titles are fit symbols of their nauseous taste and disagreeable results; and whose effects, on the human system at least, are thought to be so uncertain or unknown, that the physician who administers them is likened to a gambler, and the patient who takes them to the gambler's victim. The common talk of the unprofessional part of the community on this subject, and sometimes of the professional part, proves that I do not exaggerate this matter. I have heard the assertion, that while all other branches of science have advanced, to a greater or less degree, materia medica has stood still. Unless I greatly err, the physician of to-day is often supposed to employ the same means exclusively—emetics, cathartics, alteratives—ipecac, oil, calomel and opium—that his father did fifty years ago. He may administer them in different doses, with diminished frequency, and under different names, but after all, they are the same, "*alter sed idem.*" However radical in politics or religion, the regularly educated physician is called conservative in drugs. If he consents to steam, electricity and photography, he sticks to blue pill, the lancet, and the purge. We should infer from the language of some, that science, which has given birth to discoveries not less marvellous than useful, even in medicine, has so far neglected materia medica that its resources have not been materially increased, nor its boundaries enlarged; and that, consequently, the therapeutics of the latter half of the nineteenth century are not a great improvement over those of the fifty or hundred years before.

Such, I say, is the notion which the current language of the day not unfrequently implies. If this were true, if this notion were correct, the fact would be most lamentable. But, fortunately, it is not true. Materia Medica and its collateral branch, Therapeutics, have advanced, *pari passu,* with other departments of medicine and of science. Its progress may have been, and probably has been, quieter, less observed, less brilliant and less imposing than that of others, but on this account not the less real. The advance of science is often as noiseless and as viewless as that of the electric messenger, who speeds on his way without rustling a leaf or stirring a breath, and yet convulses a nation or changes the markets of a world in his flight.

I invite your attention, then, to-day, to a brief consideration of the progress which has been made in Materia Medica and Therapeutics within a comparatively recent period. Such a consideration forms an appropriate introduction to the special course of study which you will pursue under my direction this winter. It will also serve as an illustration of the progress which all departments of medicine are making at the present day.

The subject naturally divides itself into three distinct parts: first, a comparison of the present and past boundaries of the Materia Medica; secondly, an account of the changes which drugs have undergone; and, lastly, and most important of all, some account of recent progress in ascertaining the physiological action and therapeutic value of remedies. Any one of these divisions would afford ample opportunity for a long discussion—too long for your patience or this occasion. But by grouping them together, and treating them within the limits of a single hour, I can bring before you the prominent differences, the salient points, which distinguish the Materia Medica of to-day from that of the past, and which indicate its progress.

Following the order of thought just indicated, let us look first at the former and present boundaries of the Materia Medica; at its limits as they were and as they are; at what it formerly comprehended and what it now comprehends.

Perhaps the most obvious distinction between the past and present Materia Medica, and at the same time the most obvious indication of progress in medicine generally, is to be found in the present signification or interpretation of Materia Medica as compared with its ancient one. It is undoubtedly true, that the philosophic physician of every age, from Hippocrates till now, has employed food, water, climate and the like in the treatment of disease, and so has included them in his Materia Medica. It is equally true that only a minority of physicians have done so. Most physicians, formerly, acted as if the Materia Medica comprehended drugs alone, and left all other agents to the charlatan.

If you examine any of the ancient treatises on Materia Medica, or those of a comparatively recent period, or even many of those of the present day, you will find them devoted to drugs alone, or very nearly so. The practitioner who made these works his handbooks, had his attention directed to drugs as the sole remedial agents of medical science. Let me give you a single illustration of this. Dr. Murray, of Edinburgh, writing in the early part of the present century, and speaking of remedies, in a treatise devoted to them, says:—"Their natural characters, their sensible qualities, their effects on the living system, and their applications to the treatment of morbid affections, forming so many subjects of description or investigation, constitute the department of Materia Medica—understood in the most extensive signification of the term." Now if we examine his work in order to ascertain what was included under the head of remedies, and what was meant by the Materia Medica in its most extensive signification, we find that out of 783 pages, 751 are devoted to Pharmacy, Pharmaceutical Chemistry and Drugs, and 32 pages to other agents. The inevitable inference from this is, that so far as Dr. Murray correctly represented the Materia Medica of fifty years ago, drugs were the chief if not the only therapeutical agents which medical science recognized. He does not give a hint of mental influence, or diet, or air, or exercise, or occupation, as agents or forces entitled to be called remedies. And yet he was treating of Materia Medica in its most extensive signification. Similar illustrations of the narrow limits which were formerly imposed on Materia Medica could be multiplied indefinitely.

In like manner, professors who taught the science, authoritatively, in the schools of Europe and this country, taught only drugs. Many of them were men of great attainments, to whom we are indebted for some of the richest acquisitions of medical science, and far be it from me to undervalue them or their labors, and yet they limited the Materia Medica to drugs; they experimented only with drugs; they lectured only upon drugs. Medical students who listened to them, treasuring up the wealth that dropped from their lips, were indoctrinated with the notion that skill and success in the management of disease would be in proportion to their knowledge of the properties and effects of drugs. Hence it came to be the case that physicians, generally, the world over, relied mostly, if not solely, on drugs in their treatment of disease. When they prescribed them, they supposed they were employing the best resources of medical art. When they spoke of treatment, they meant drugging. Gradually this prevalent teaching of the schools and practice of physicians led the public into the same way of thinking. Drugs formed the domestic Materia Medica of the world. They were the empiric's bait and the physician's resource.

It must not be forgotten, however, that there were physicians superior to this traditional teaching of the schools; men whose native genius or common sense made them incorporate into their Materia Medica other agents than drugs. But such men were exceptional. The catalogue of their names would not be long, and it would include the master minds of our profession, Hippocrates, Sydenham, Hunter and the like.

Such were the former boundaries of the Materia Medica. In its widest signification, it was limited to drugs. The professors of the schools observed these limits. Physicians kept religiously within them. Authors of elaborate treatises did not wander beyond them. The world accepted them as the orthodox limits of the science, and so Materia Medica was narrowed down to drugs; and treatment, to drugging.

Modern Materia Medica is not so narrow a science. It has a wider range, a larger horizon. It includes more agents than the druggist can pile up on his shelves, or the chemist torture in his laboratory. It comprehends drugs, and establishes their value and teaches their use, but it comprehends other agents also. It teaches that every influence, or agent, or force that can favorably modify disease or assist Nature's conservative action, is a remedy.

I will not ask you to accept this statement on my dictum merely. Let me give you some evidence of it. If you open the elaborate work of Dr. George B. Wood, on Therapeutics and Pharmacology, published ten years ago; or the still more elaborate work of Stillé, published four years ago; or if you read the medical journals of the day, such, for example, as *Virchow's Archiv*, or the *Annales d'Hygiene*, or the *Bulletin de Thérapeutique*, you will learn that other agents than drugs enter into the Materia Medica of the present day. Dr. Wood, in the work just referred to, gives more than fifty pages to an account of Electricity as a remedial agent. He reckons and describes Heat as a stimulant. He treats of Cold, in the form of water, or air, or ice, as a diuretic, an anæsthetic, an astringent, a stimulant, a sedative and a tonic. He discusses and points out the value of the mind as a remedy, and shows how mental influences, like the sensations, emotions and passions, may be employed in therapeutics. Diet, food and water, climate and clothing, occupation and exercise, are described by him as a part of the Materia Medica. An intelligent American physician has given us an elaborate and valuable monograph on the physiological and therapeutical use of water. The treatises of Duchenne, Becquerel, Althaus and De la Rive, on Electricity, show how important a place that subtle and mysterious force holds in Therapeutics.

To show that varieties of diet have acquired an established position in our modern Materia Medica, I need only cite the recent works of Dr. Chambers, on Diet and Digestion; of Dr. Brinton, on Food; and the records of the invaluable labors, in this direction, of Virchow, Bidder and Schmidt, Bischoff, Bernard, Hammond and others. These observers have demonstrated that the most rational and effectual method of treating certain forms of disease is to prescribe an appropriate diet, oleaginous, farinaceous, saccharine or otherwise, and thus have brought food within the strictest definition of the Materia Medica. Their observations show, moreover, what I fear is often neglected, or forgotten, or disbelieved, viz., that as much knowledge, experience and skill are requisite to prescribe and regulate an appropriate diet as to administer quinine in a quotidian, or opium in colic, or iron in anæmia. Dr. Anstie, of London, in an excellent work on Stimulants and Narcotics, published this year, places food at the head of the list of stimulants. After it he puts opium, ammonia, alcohol, &c. He expresses himself thus with regard to it: "At the very head of this list it will be seen that I have placed food.

I do so because if food can be digested there is nothing which in so many cases relieves pain with satisfactory celerity, unless it be kept up by a mechanical cause. The action of all the other remedies in the list is a pale reflex of that of highly nutrient and easily digested food."*

I have already alluded to the mind, or mental influence, as coming legitimately within the province of Materia Medica. The mind is a remedy. Our modern science claims it as a potent therapeutical agent. I have just stated that Dr. Wood classifies it with stimulants and sedatives. The work of Dr. Laycock, on Mind and Brain, or Correllations of Consciousness, is not only a curious and interesting inquiry into one of the most difficult departments of physiology, but it establishes the fact that the mind may cause and relieve pathological conditions; in other words, that the mind is a remedy, a part of the Materia Medica. The same fact is brought out by M. Lélut, in his work entitled Physiologie de la Pensée. A book by the late Sir Benjamin Brodie, on Mind and Body, indirectly illustrates the same thing. Feuchtersleben, a German writer, has written a monograph on the special point of the mind as a remedial agent. The journals of medicine for the last twenty-five years have contained numerous articles, from various authors, on the Will, or the Imagination, or the emotions, as agents that produce profound physiological effects; that *relieve*, as well as cause disease. The field is a new and unexplored one. Its investigation demands the utmost patience, judgment and acuteness; but the exploration has begun, and will go on.

I should weary your patience, were I to pursue this part of my subject farther. Enough has been said to show that the boundaries of Materia Medica have been greatly enlarged, and to point out the general direction of its growth. It is no longer limited to drugs. They are not excluded, but other agencies are added. It has become the complement of Theory and Practice, and the handmaid of Chemistry and Physiology in their most abstruse investigations. It provides the practitioner with whatever may be used to turn the currents of disease into favorable channels. It searches Nature everywhere to find its materials or agents. It lays hold of every substance, whether animal, vegetable or mineral, that can be tortured or coaxed into aiding the aching body. It grasps every force that can render it any service, and calls it a remedy, whether it come from the heavens above, or the earth beneath, or the waters around the earth, or from the soul within. Guided by a wise and patient observation, reverently following Nature's leading, it thus paves the way for rational therapeutics. With a range so extensive, with a signification so comprehensive, how different is the Materia Medica of to-day from that of the past, and from the common notion of it.

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* Stimulants and Narcotics. By Francis E. Anstie, M.D. Pp. 115.

Taken out from its ancient and narrow limits, it has become one of the most important and most interesting branches of human study.

Not only have the boundaries of the Materia Medica been thus enlarged, but the catalogue and character of drugs to which it was formerly confined have been greatly changed. Many worthless preparations have been discarded. A few new ones have been added. A more exact knowledge has been acquired of the chemical properties, the physiological action and the therapeutical value of those which have been retained, and which are now used. The progress which has been made in this direction is such as to warrant the belief that Therapeutics will some time become a rational and exact science.

It is difficult to say whether it is more ludicrous or sad to look back upon the superstitious charms, nauseous substances and absurd compounds, many of which the vulgar still cling to, that have encumbered the Materia Medica, and so obscured it, that wise men have doubted if there was anything of value in it. It is not two hundred years since treatises on Materia Medica described, and recommended as useful, substances as revolting as the hairs of a leper, the horns of a beetle, the blood and liver of a dog, the hoof and urine of an ass, the heart of a serpent, the saliva of a horse, the skin of a snake, the fæces of a cat, the blood and sweat and urine and ear-wax of human beings, the hearts of new-born children, spiders' bodies, dead men's hands, and murderers' gibbets. Shakspeare's witches may have taken their recipe from a contemporary Materia Medica, when they compounded for Macbeth their famous gruel of

> "Eye of newt, and toe of frog,
> Wool of bat, and tongue of dog,
> Adder's fork, and blind-worm's sting,
> Lizard's leg, and owlet's wing:
>
> . . . .
>
> Liver of blaspheming Jew,
> Gall of goat, and slips of yew,
> Sliver'd in the moon's eclipse;
> Nose of Turk, and Tartar's lips."

The British College formerly directed the following preparation for the benefit of the king's subjects. It was called Aqua et Spiritus Lumbricorum Magistralis, or water and spirit of earth-worms. The original direction of the College reads thus:—" Take of Earth-worms well cleansed three pound, Snails with shells on their backs cleansed two Gallons, beat them in a Mortar, and put them into a convenient Vessel, adding stinking Nettles, Roots and all, six handfuls, wild Angelica four handfuls, Brank-Ursine seven handfuls, Agrimony, Bettony, of each three handfuls, Rue one handful, common Wormwood two handfuls, Rosemary-flowers six ounces, Dock-roots ten ounces, the Roots of Sorrel five ounces, Turmerick, the inner bark of Barberries, of each four ounces; Fenugreek-seeds two ounces, Cloves powdered three ounces. Harts horn, Ivory in gross powder, of each four ounces; saffron three drams, small spirit of wine four Gallons and an half; after twenty-four houres infusion, distill them in an Alembick, Let the four first pounds be reserved for Spirit, the last for Water."

But we need not go back a century to find absurd and useless prescriptions and preparations. There are quarters where they still abound. Within a few years, I knew of a Boston physician who advised, and a Boston patient who wore, next the skin, for the relief of some pulmonary affection, a pork jacket. In a book published within the last decade or thereabouts, whose author belongs to a sect that claims to represent a peculiar advance in Therapeutics and Materia Medica, I have seen the directions for a preparation, intended for the treatment of what the learned call scabies, and the laity, itch, which consists of the infinitesimal dilution of a louse.

It is one of the signs of progress in Materia Medica that these and similar absurd preparations no longer deface our Pharmacopœias, or encumber our Dispensatories. They may be heard of in corners and holes where no light penetrates, and where superstition and credulity still find a congenial home, but they are no longer advised by educated physicians.

Another characteristic of modern Materia Medica is greater simplicity in the preparation of drugs. Preparations were formerly made from an indefinite number of articles. Instead of directing them from a single drug, or uniting it with one or two others, so as to meet some obvious indication, the authors of the older pharmacopœias, led by a fanciful theory or metaphysical notion or strange superstition, often prepared the most extraordinary compounds. Some of the ingredients might be valuable, but these were buried in such a mass of useless and often disgusting stuff, a few grains of wheat in bushels of chaff, that it required a microscopic vision to detect the gold in the dross. Modern Materia Medica has retained all of these preparations that possess real merit, but has so curtailed their proportions, so winnowed them from the chaff, that they can scarcely be recognized in their modern attire. They are like noblemen, who can trace their ancestry back for centuries, and bear the name their fathers bore, but are so changed by modern civilization that we can scarcely see in them, to-day, the blood which stirred the veins of their ancestors a thousand years ago. And yet it is there. Put them to the proof, and the old blood mounts to the forehead and sparkles in the eye. So in the Materia Medica, the useful part of a compound--the blood of the race—has descended from age to age, each century stripping off and throwing away more or less of the trappings that encumbered, and cerements that bound, and filth that buried it, till now, in the clearer light of to-day, its substantial value stands confessed. Such articles or compounds are of royal lineage. Every age, as it passes, re-asserts their value. Many of them boast an antiquity beyond that of the Herald's College. Thus some, like opium, trace their ancestry back to the sacred and shadowy mysteries of India and Egypt; others, like iron, to the classic mythologies of Greece and Rome; others, like nitrate of silver, to the glittering civilization and embryonic chemistry of Arabia and the East; and others, like antimony, to the mingled alchemy, superstition and empiricism of Europe's middle age. Many of them still bear the names which indicate their mystic origin and early use, but whose significance has passed away.

Open any of your works on Materia Medica at random, and you will scarcely fail to meet with an illustration of these remarks. Almost every one of the drugs they describe has gone through this process of change and simplification. Let me give you a single example.

There is a delightful and canonical compound of spices, which, under the name of Spiritus Lavendulæ Compositus, warmed the stomachs and cheered the hearts of our forefathers, two hundred years ago. A compound, with the same name, warms the stomachs and cheers the hearts of thousands to-day. The British College formerly ordered its preparation as follows:—"Take of Lavender-flowers one Gallon, to which pour three Gallons of the best Spirit of Wine, let them stand together in the Sun six days; then distil them with an Alembick with his refrigeratory.

"Take of the flowers of Sage, Rosemary and Betony of each one handful; the flowers of Borrage, Bugloss, Lillies of the Valley, Cowslips, of each two handfuls; let the flowers being newly and seasonably gathered, be infused in one gallon of the best Spirit of Wine, and mingled with the foregoing Spirits of Lavender-flowers, adding the leaves of Balm, Featherfew and Orange-tree fresh gathered, the flowers of Stœcha and Orange-tree, Barberries, of each, one ounce. After convenient digestion, distil it again, after which add Citron peels, the outward bark: Peony-seeds husked, of each six drams; Cinnamon, Mase, Nutmegs, Cardamons, Cubebs, yellow Sanders, of each half an ounce; wood of Aloes, one dram, the best Jubebs, the stones being taken out, half a Pound, digest them six Weeks, then strain it and filter it, and add to it prepared Pearls two drams, Emeralds prepared a scruple, Ambergreece, Musk, Saffron, of each half a scruple; red roses dried, red Sanders, of each half an ounce; yellow Sanders, Citron-peels dried, of each one dram; let the Species being tyed up in a Rag, be hung in the foregoing Spirits."*

Compare this extraordinary mixture—this farrago—which, however, has had virtue enough in it to save it from oblivion, with the elegant composition which bears the same name now, and is the lineal descendant of the ancient one. The United States Pharmacopœia directs the Compound Spirits of Lavender to be prepared as follows:—

"Take of Oil of Lavender a fluidounce;
Oil of Rosemary two fluidrachms;

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* Quoted from Culpepper's "Physician's Library," p. 124.

Cinnamon, in moderately fine powder, two troyounces;
Cloves, in moderately fine powder, half a troyounce;
Nutmeg, in moderately fine powder, a troyounce;
Red Saunders, in moderately fine powder, three hundred and sixty grains;
Alcohol six pints;
Water two pints;
Diluted Alcohol a sufficient quantity.

"Dissolve the Oils in the Alcohol, and add the Water. Then mix the powders, and, having moistened the mixture with a fluidounce of the alcoholic solution of the Oils, pack it firmly in a conical percolator, and gradually pour upon it the remainder of the alcoholic solution, and afterwards Diluted Alcohol, until the filtered liquid measures eight pints."

Here is a difference which marks two centuries of progress. Two hundred years have eliminated from this compound twenty-seven useless ingredients, and left eight useful ones. Do you call this a slow and tedious advance? Reflect, then, for a moment, and ask if any other science or art has done better. Has Law, or Politics, or Theology eliminated from any one of their formulas more than twenty-seven errors in two hundred years?

It is worthy of remark, in this connection, that we possess a much more exact knowledge of the properties of drugs than formerly existed. Chemistry, in this respect, has rendered to Materia Medica an infinite service. All important articles have been carefully analyzed. Their component parts or principles have been discovered, and many of these have been isolated and prepared for use. So that when a physician administers a certain drug he knows precisely what he is giving to his patient. He may prescribe it, in its natural state, for the purpose of giving all its active principles together; or he may administer one of them separately, or he may recombine them in proportions different from their original conditions. Thus, when the Countess of Cinchon, in 1640, first took the bark which bears her name, and which his Holiness, Pope Innocent X., authoritatively pronounced not only "innocent but salutary," she swallowed a coarse powder, not unlike, in appearance and digestibility, the ground oak bark of our native forests, of whose active principles the physician of the Countess or of the Pope knew as little as he did of the properties of the magnet or of the power of steam. Our present Materia Medica contains a minute and exact description of every principle, active or inactive, that exists in cinchona bark. Cinchona has been analyzed and examined over and over again, till our knowledge of it has become precise. When the Countess took her dose of bark, she swallowed at least a tablespoonful of a coarse and disagreeable powder. Should the failing health of his present Holiness now require an equal dose, his physician would prescribe a delicate alkaloid, of which enough for a dose could be held on the blade of a penknife, and which in color and beauty would resemble the feathery crystals of the snow.

And here let me call your attention for a moment to the elegance which characterizes the preparations of our modern Materia Medica, as no small indication of its progress. Formerly, so much that was nauseous and disgusting was found in the Materia Medica of physicians, that it seemed as if the therapeutic value of an article was measured by its filth, offensiveness and bulk. In what terms shall I describe an emetic, often given to his patients, as he himself told me, by a physician of this city, now dead—*requiescat in pace*—which was no unfair representative of the emetics of his time, and which consisted of 60 grains of calomel, and 60 grains of ipecac, and 60 grains of jalap, divided into three powders, of which one was to be taken every fifteen minutes. When we think of the pints of black draught that were swallowed, the quarts of bitters that were imbibed, the huge powders that were stuffed down, we are amazed at the powers of our ancestors' stomachs and the unflinching courage of their souls. All this is changed. Pharmacy has become one of the fine arts. Pills are gilded now. Physic is so flavored that it charms the palate and woos the appetite. I do not speak of this change to ridicule or condemn it. Drugs will never be made delicious. They will never be sought for as a gratification of the taste. But it is fortunate that they have been so extracted by chemistry and prepared by pharmacy that the sick chamber has lost one of its ancient terrors, the foul odor and taste of the drugs that once were the whole and now are a part of medical treatment. Instead of the old infusion, there is the concentrated extract. Instead of the crude bark, we have the elegant alkaloid. Our ancestors gave liquids by the pint and powders by the ounce. Their children give liquids of equal efficacy in fractions of an ounce, and powders in fractions of a grain. Simplicity in preparation, elegance in form, and energy in action characterize the drugs of the modern Materia Medica.

Within the last year a revised Pharmacopœia has been published in this country. A similar one has lately appeared in Great Britain. A comparison of these two works with similar ones published a century ago, will show how great the change is which drugs have undergone. What experience has proved to be useful has been retained. What it has shown to be useless has been discarded. Whatever valuable agents empiricism has stumbled on, or botany discovered, or chemistry created, or physiology taught the use of, has been incorporated into these works. They are not perfect. The process of elimination and simplification might have been carried further. But enough has been done to render the last Pharmacopœias of the United States and Great Britain admirable representatives of our present knowledge of drugs, and a fair index of their place in the therapeutics of the present century. On the one hand, their curtailed proportions show how much they have been pruned. On the other hand, the retention of many long-tried articles proves that there are drugs whose value has been attested by the keenest criticism and the closest observation. Modern science neither ridicules nor discards drugs. It accords to them a substantial merit, and assigns to them an important though subordinate place in therapeutics. This of itself is no mean evidence of progress in Materia Medica.

After this imperfect comparison of the past and present boundaries of Materia Medica, and of the changes which drugs have undergone, we pass naturally to some account of the progress which has been made in studying the action of remedies and ascertaining their therapeutic value.

This is the most important part of my subject; for it is precisely here that the greatest progress has been made. I can only allude to it in the briefest manner now. It will receive a larger development in the course of lectures upon which we are just entering.

Give me the methods of a science, says Cousin, and I will give you its results. If its methods are true, its results will be true. If its methods are false, its results will be false. No better illustration of this remark can be found than Materia Medica affords. Formerly, the method of studying remedies confounded two essentially different things; viz., the physiological and therapeutical action of remedies. Few, if any, attempts were made to ascertain their precise physiological action. They were administered only in pathological states, and consequently their effects were observed only in diseased conditions. Hence almost inevitably the phenomena of disease were confounded with or taken for the action of remedies. The confusion which this produced was increased by another error of method. Diseases were so constantly interfered with by the experimental exhibition of drugs, that their natural course was not recognized. Here was a double error. Drugs, whose physiological action was unknown, were administered for the treatment of diseases whose natural course and limitations were undiscovered. These errors of method led to the inextricable confusion and illogical statements that may be traced all through the Theory and Practice as well as the Materia Medica of the past.

Fortunately, in the progress of medical science, these uncertain and fallacious methods of investigation have been abandoned. The necessity of adopting a juster method has been recognized. The extent of the change which has taken place, and of the progress which has been made in this respect, especially in Materia Medica and Therapeutics, during the last quarter of a century, can be estimated only by appreciating at their true value the results to which more scientific methods have led.

Our modern Materia Medica recognizes two conditions as the necessary basis of rational therapeutics. The first is an exact knowledge of the physiological action of remedies. The second is an equally exact knowledge of the natural history of diseases.

Unless these two conditions are observed, Therapeutics in the future will be what they have been in the past—empiricism. These conditions are the sure and only possible foundation of scientific medicine. It has not yet been completely laid. We do not yet possess an exact knowledge of the physiological action of remedies, nor of the natural history of diseases. But we do know something with regard to them. Patient, earnest and intelligent workmen, the world over, are busy collecting the materials and laying the foundation. Little by little the materials are gathered, day by day progress is made, and so the work goes on.

Let us look, for a moment, a little more closely at these two conditions, or rather problems, for such they are at present. The attempt to solve them is a sign of progress. Their complete solution would place medicine among the exact sciences. Materia Medica is concerned chiefly with the first condition or problem; Theory and Practice with the second. Therapeutics embraces them both.

In studying the first, or the physiological action of remedies, observers of the present day are occupied with two distinct series of inquiry. One is an endeavor to trace the progress of an agent through the body, and the metamorphoses to which it is subjected, from its entrance to its complete elimination, without regard to the phenomena to which it gives rise in the system; the other is an endeavor to ascertain these phenomena, or the reaction of the system upon the agent as it passes through the body, in the order in which they are produced, and in the extent to which they go. These inquiries are of the most abstruse and complex character. They involve the highest degree of chemical and physiological knowledge. They require the nicest chemical manipulation, the most ingeniously devised and patiently conducted physiological experiments. But the science of to-day does not shrink from the difficulty of the problem. It recognizes that difficulty, and has already accomplished enough to give assurance of complete success, by and by. An admirable illustration of this statement is to be found in the work of Briquet on Quinia. He has shown us precisely what is the course of quinia through the body. He has discovered how long quinia remains in the stomach when it is introduced there; what the stomach does with it; how and when it gets into the blood; what the blood does with it; where the blood carries it to; when, and by what organs, and in what quantities and in what condition it is eliminated. So that if you give a man twenty grains of quinia, you can tell, if you know the recent researches of Materia Medica, what becomes of those twenty grains; you can tell how and in what condition they get into the body; you can trace them, however disguised, in all their hidden wanderings through the mysterious channels of the circulation and the recesses of the organization; you can see them in all their metamorphoses, and know when and how they escape. After thus ascertaining the progress of quinia through the system, Briquet took up the other part of the problem, and determined the physiological phenomena which quinia produces, from the period of absorption to that of elimination. He discovered how the tissues of the stomach acted, while the quinia sojourned there; how the albumen, fibrin, hæmatin and serum of the blood behaved in its presence; how the brain and nerve tissue were excited and depressed by it; what the heart said to it; how the spleen and liver liked it; and how gladly the kidneys expelled it. With this knowledge of its physiological action, Briquet next turned his attention to the therapeutical use and value of quinia. The former is the key to the latter. As soon as the behavior of quinia in the system was known, and the modifications which it impresses on the functions and composition of the organization were discovered, it was not difficult to ascertain the proper art of giving it, or to fix its therapeutical value. What Briquet has done for quinia, other observers have done, with greater or less success, for coffee, tea, opium, alcohol, mercury, &c. They are following the same methods of study, and thus the agents of the Materia Medica are subjected to a renewed and most patient investigation. The progress which is made is, from the nature of the case, slow, but it is a real one.

The attempt to solve the second problem that I have alluded to, or to ascertain the natural history of diseases, is also pushed vigorously forward. Scientific physicians in Europe and this country, in Vienna, Paris and London, in New York, Boston and Philadelphia, are watching and noting the phenomena of disease as carefully and patiently as astronomers watch the stars. And an equal success crowns, or will crown, the labors of each. For the present progress of medical science is the prophecy of its future attainment. It is no vain boast to say, that we can now read the signs of that coming time when the physician shall know the orbit of a disease as accurately as the mathematician that of a planet.

Gentlemen, I have thus traced an imperfect sketch of the progress of Materia Medica. I have shown you that the evidences of its progress may be seen in its larger boundaries; in its juster appreciation of medicinal agents; and in its truer methods of study. Let us not forget that the progress which signalizes the Materia Medica and Therapeutics of the nineteenth century, also characterizes every other department of medical science. Anatomy, Physiology, Pathology and all the collateral branches of medicine join with no laggard or faltering step in the majestic progress with which all science and art moves on. You have come to this University to-day for the purpose of commencing or pursuing the study of a living and progressive science—not of a dead or stagnant one. Here you will not dissect the dried bones or explore the fossilized dogmas of the past, but learn the sacred mysteries—the living truths, which, however old, are always new, and which Nature ever more and more liberally reveals to her faithful disciples. May you come to your work with the consecration of an earnest purpose, and follow it by the light of a lofty ideal. For you cannot over-estimate the nobility of medical science. Its field of study is God's noblest creation—man; its inspiration is man's divinest motive, the love of truth; its object, worthy of Omnipotence, is the relief of a suffering race.

Bibliographical Notices.

The Principles and Practice of Obstetrics. By Hugh L. Hodge, M.D., &c. Illustrated with one hundred and fifty-nine lithographic figures from original Photographs, and with numerous Wood-cuts. Philadelphia: Blanchard and Lea. 4to. Pp. 550. 1864.

We are glad to welcome this valuable treatise on Midwifery, a work valuable in material, excellent in execution, and fitted to supply a want which has been felt by the student and the practitioner. The author gives to his brethren in the profession the experience of a long and active practice, largely devoted to the branch of which he writes. For forty years a lecturer in the schools—thirty-one of which have been spent in teaching obstetrics—he has gained a knowledge of the wants which young practitioners feel, and it is for them the work is particularly fitted. He does not profess to offer another compendium of the science, but simply a practical review of the whole subject, giving principally his own views and his own experience, as previously propounded before the classes in the University of Pennsylvania. We would especially notice his plain, practical method of explanation of the various portions of his subject, and more particularly of the *little* points which every young man has to learn by bitter experience, but which almost every author hitherto seems to have considered self-evident and therefore omitted.

The early chapters are devoted to the pelvic organs, the fœtus, gestation, the management of pregnant women and the mechanism of labor. The second part, on Eutocia or Natural Labor, includes the normal presentations by the head and breech. The third division comprises obstetric operations, and the fourth treats of Dystocia, or Difficult Labor, caused by complications from the fœtus or the mother. Certain pathological states and conditions frequently attending midwifery occupy the closing chapters.

The book is well printed on good paper. We are particularly struck with the plates, which are in truth helps to the learner, instead of being, as is frequently the case, problems to be solved, the like of which the student has never seen or ever will see in nature. The illustrations are mostly lithographs from original photographs, and are well selected for the object they have in view. In addition, a large number of wood-cuts serve to illustrate the subject. A full and complete index finishes the volume.

The eminent surgeon, M. Nélaton, has recently received a very handsome gold medal from the Italians resident in Peru, as a token of their gratitude for his attendance on Garibaldi.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

SEPT. 26th.—*Suspension of Labor-pains after dilatation of the Os Uteri.*—Dr. STORER said that he had been called to a patient boarding at a place 12 or 14 miles from town, who had had labor pains for two or three days. The os was dilated to the size of a dollar, and he thought she would be delivered in a few hours. The pain ceased, however, and it was decided to remove the patient to Boston, Dr. S. accompanying her in the carriage. During the drive she had some severe pains, so that he feared she might be delivered in the carriage, but she reached town safely, and the pains again stopped. There having been no advance for two days afterwards, Dr. S. ruptured the membranes (with difficulty, on account of their excessive toughness), labor came on, and the patient was delivered of twins, weighing 7 and 8 pounds. This patient was excessively unwieldy, from an enormous quantity of liquor amnii, and perhaps the great tension of the abdominal muscles may have interfered with their prompt action. Dr. Storer had met with a similar case six or seven years ago; the os was dilated, the membranes protruding, and he thought delivery would take place in a few hours, but the patient was not confined for ten days. He had also met with the same peculiarity, though in a less marked degree, in one other case, these being all he had seen during a practice of thirty-eight years.

Dr. WARREN said that he had been called to this patient some weeks before her confinement, and found her suffering from violent and painful contractions of the abdominal muscles, considered by her friends as convulsions; they were relieved by an opiate and sinapisms to the inside of the thighs. Two weeks afterwards he was called to her again, on account of violent neuralgic pains in the hips and thighs. On making an examination, he found the head of the fœtus pressing upon the os. By changing the position of the head a little, the pain was instantly relieved. Soon afterwards labor pains came on, and he transferred the patient to the care of Dr. Storer.

OCT. 10th.—*Case of live Birth at the beginning of the sixth Month.*—Dr. MINOT reported the case.

A respectable married woman, who had had no children previously, ceased to menstruate May 1st. She quickened Sept. 17th, and was confined Oct. 10th; the duration of pregnancy, counting from May 1st, having been 23 weeks and 1 day, or 162 days. The child, a male, weighed one pound and three quarters, and lived forty.eight hours.

OCT. 10th.—*Necrosis of the Astragalus.*—Dr. CABOT showed two casts of the foot of a little boy who entered the hospital, Feb. 16th, for disease of the ankle; one having been taken before treatment and the other after. The patient was a weak, puny boy, 8 years old. The disease began a month previously, but no further history of the case could be obtained. The right ankle and foot were swollen and painful. Fœtid pus issued from an opening below the external malleolus. Traces of scrofulous abscesses were seen below the ramus of the jaw. He was ordered beef-tea, wine, and a poultice to the foot; and ten days after his entrance he was etherized, and an examination of the foot made. On making an incision, several large pieces of the astragalus, which were perfectly loose, were removed with the forceps. They comprised the entire astragalus, denuded of its periosteum. The hæmorrhage was controlled with a tampon of lint, inserted into the wound. The patient was ordered cod-liver oil, beef-steak and wine. He improved rapidly, both in his general condition and locally. The discharge gradually ceased, and the wound filled with granulations. Six weeks after the operation he was on crutches; and in another month he could walk without them. The motions of the ankle-joint were good. The cavity from which the astragalus was removed was filled up with adventitious deposit, and the patient was discharged well. The malleoli of the right leg were nearer the sole of the foot than in the left, and it would appear that the bones of the leg had fallen somewhat into the foot. The length of the sole was the same in both feet.

May 9th.—*Diseased Bladder.*—Dr. Hodges showed the specimen, which came from a man 35 years old, a hostler by occupation, whom he had treated with Dr. D. T. Coit. The patient had had frequent and painful micturition for a month or more before he applied for medical aid, and the symptoms had become so much aggravated as to incapacitate him from his work. There was severe pain in the renal region, and the urine was voided with much pain, and as often as once an hour. There was tenderness over the bladder, with occasional retching and vomiting; pulse not very rapid. The catheter was used with relief. Symptoms of peritonitis afterwards set in, and the patient died.

The bladder was about one half or one third as large again as the fist. Its walls were half an inch thick, and the muscular coat was quite developed. Its inner surface was nowhere smooth, and in many parts was covered with shreds, and rough, irregular, fleshy elevations, as large as the tip of the little finger, from the thickening of the submucous cellular coat. Connected with the bladder by an opening from two to three inches in diameter was a sac, considerably larger than the bladder itself, which held two fists. The left ureter opened into the sac, half an inch from the bladder, and was considerably dilated, as was also the pelvis of the corresponding kidney, which contained a dark-brown, irregular calculus, with prolongations extending into the calices.

Oct. 10th.—*Tuphlo Enteritis.*—Dr. Fifield reported the following case:—

" Wednesday, Sept. 28th, I was asked to see a person at South Braintree, who had been ill with typhoid fever for six weeks, and was not recovering satisfactorily.

" I found a young gentleman, 19 years old; exceedingly emaciated; with a bright eye; some flushing of the countenance; skin slightly discolored in spots above the knees and ankles, with ecchymosis. He had had sores upon the lower limbs, one of which had yielded some pus. Pulse 80 in the minute. Abdomen moderately full, and not tender at the present moment, but had appeared to be so to the attending physician some time previously. The bowels were and had been somewhat loose; three or four evacuations daily; sometimes restrained by opiates. Appetite ravenous. Tongue clean. Ordered a pill composed of acet. plumb., gr. ij., opii, gr. i., three times a day until diarrhœa ceased. The bowels then to be allowed to move once in two or three days. Quinine, gr. ij., with dilute sulphuric acid, to be given three times a day before meals. Diet, beef-tea, frequently, in small quantities; rice, boiled, or blanc-mangé, as patient wished. Sherry wine, a teaspoonful once in two hours during the day, occasionally through the night. Prognosis favorable.

"Saturday, Oct. 1st, I received a note from the attending physician, stating 'that the quinine and wine had been given as directed. Of the pills, four had been given and then omitted, as the bowels ceased to move. Soon he began to suffer pain in the bowels. A little difficulty in urinating. Fomentations applied, and began to give him something to move the bowels, but without success. Last night he had a shaking turn. Pulse 80.' I visited him in the afternoon. Found him in great pain. Abdomen universally sensitive, but upon pressure over the right iliac region he complained of excessive pain. Pulse 130. Tongue dry and brown. He had taken a large dose of castor oil. Had had repeated enemata, and another was preparing at the time of my visit. I expressed a decided opinion that perforation of the intestine had taken place, deprecated any further attempt to move the bowels, gave a teaspoonful of laudanum, and ordered pulv. opii, gr. ij., hyd. submur., gr. i., every six hours, to keep him easy. Death took place the following day.

Post-mortem examination on Monday, Oct. 3d. On opening the abdominal cavity, a considerable quantity of fluid resembling thin gruel escaped. The intestines were seen to be universally inflamed, but particularly so over the region of the cœcum. Flakes of lymph adhered to the surface of the liver. The intestines having been removed, the appendix cœci was found to present an irregular perforation, admitting the end of the little finger. Edges dark and sloughy. Closely impacted in the appendix cœci, just above the perforation, was a foreign body, about the size of a marrowfat pea, supposed by myself and others to be a cherry-stone, but may be a phosphatic concretion. The intestines having been cut through in their length, appeared perfectly healthy, with the exception of a shallow gray ulceration found at the lower part of the ilium, supposed to be in the situation of Peyer's patches."

The concretion is in the Society's possession.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 17, 1864.

Irregular and Quackish Advertisements.—A friend sends us the following communication:—

Messrs. Editors,—In the Regulations of the Boston Medical Association, re-issued in the spring of 1864, I read, page 9, as follows:—

"*Discouragement of Quackery.*—The use of quack medicines should be discouraged by the Faculty, as disgraceful to the profession, injurious to health, and often destructive even of life. No physician or surgeon, therefore, should dispense a secret nostrum, whether it be his invention or exclusive property ; for, if it is of real efficacy, the concealment of it is inconsistent with beneficence and professional liberality ; and, if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice."

I thus read the Regulations of the Boston Medical Association ; and I have always supposed that every member of that Association is bound to observe these rules in so far as lies in his power. Now, Messrs. Editors, in several issues of a daily Boston newspaper, I find under the heading of "Medical Notices," an advertisement stating that Dr. —— cures, *unfailingly, consumption,* according to his own published investigations, &c. &c. You have undoubtedly, Messrs. Editors, been furnished with a copy of that "remarkable" (?) pamphlet, which, according to the writer's statement therein, you refused to publish, because of its being impracticable. and because of the pretended use of remedies the nature of which the writer refused to divulge. Now, I simply desire to ask you to answer, in your JOURNAL, the following questions :—

1st. Is not the above advertisement, based, as it is, upon the beforementioned pamphlet and its secret remedies, *a flagrant violation* of the rules and regulations of the Boston Medical Association ?

2d. If such is the case, ought not the guilty member to be summarily expelled from the said Association ? ⁂

The answer to this communication is as simple as it is short. The advertisement above copied is a direct violation of the spirit, if not the letter, of the regulations of the Boston Medical Association, of which, we regret to say, the advertiser is a member. We have not seen the pamphlet referred to, and cannot, therefore, speak from our own knowledge of the remedies suggested in it, nor the manner in which they are spoken of ; but if it is in substance a paper read by the same author some time since before the Suffolk District Medical Society, it is utterly unworthy of the notice of a scientific physician. Furthermore, nothing can be more unprofessional than for a medical man thus to proclaim to the community alleged superior claims to their confidence. But when his assurance reaches the climax of this advertisement, he places himself entirely outside of the line which divides the regular from the irregular practitioner. We find in the Rules and Regulations of the Boston Medical Association that No. XVII. reads as follows :—

> "XVII. Every candidate, at the time of becoming a member of the Association, shall sign the following obligation, which shall be in a book deposited with the Secretary :—
>
> "'*The undersigned approve of the Regulations of the Boston Medical Association, and agree upon their honor to comply with the same.*'"

The author of this flagrant advertisement has signed, we presume, this obligation. His conduct clearly comes within the supervision of the Standing Committee, whose duty it is "to attend to and decide upon all matters which regard the interest or honor of the Association, especially to act upon all infringements of its regulations which may come to their knowledge, and to call special meetings of the Association when they judge proper." To the Standing Committee, therefore, we respectfully refer this gross instance of unprofessional conduct.

On the Purity of foreign Iodide of Potassium. By F. C. Clayton.—The high price and large consumption of this article has made it one which the manufacturer has special temptations to adulterate. Of late years very large quantities of foreign make have found their way into our markets, giving rise to keen competition, which, in the case of drugs, is often far from improving their quality. From these considerations we might still expect to find much that is impure, but the results detailed below lead us to a different conclusion. The impurities of iodide of potassium are bromide and chloride of potassium, and sulphate, iodate and carbonate of potash. Moisture in excess is also to be considered an impurity, for, besides giving the sample a greater liability to deliquesce, it shows an article of imperfect manufacture. The first-mentioned adulterant, though it has been frequently used, has in none of the fifteen samples experimented upon been found, and the second only in quantities from 3·7 per cent. down to minute traces. Sulphate was never found in ponderable quantities, and iodate in only three, all of which, however, were of foreign manufacture. (Several English samples were analyzed for the sake of comparison.) In these three cases it never amounted to 1 per cent. Carbonate, though more generally present, never amounted to 1 per cent., generally much under this. From these results, it will be seen that the iodide of potassium now in the market is practically pure, the percentage in all the samples being over 95°.—*Proceedings of British Pharmaceutical Conference.*

Notice.—Some months since a friend borrowed of one of the Editors of this Journal Hammond's work on Military Hygiene. The borrower will confer a special favor by returning the same to this office at his earliest convenience.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, November 12th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	40	38	78
Ave. mortality of corresponding weeks for ten years, 1853—1863,	37.5	36.7	74.2
Average corrected to increased population - - - - -	00	00	79.77
Death of persons above 90 - - - - - - - -	1	0	1

Pamphlets Received.—" Spinal Irritation " ; or, the Causes of Back-ache among American Women. By Charles Fayette Taylor, M.D., of New York. New York : W. Wood & Co. 1864.

Died,—At Topsfield, Nov. 13th, Dr. Royal A. Merriam, in his 80th year.—At the Foster General Hospital, Newbern, N. C., Nov. 1st, of yellow fever, contracted while professionally attending the sick at Fort Stevenson, N. C., Dr. Dixi Crosby Hoyt, Asst. Surg. 2d Heavy Artillery. Dr. Hoyt was formerly of Milford.

Deaths in Boston for the week ending Saturday noon, Nov. 12th, 78. Males, 40—Females, 38.—Abscess, 1—accident, 2—apoplexy, 1—asthma, 1—inflammation of the bowels, 2—congestion of the brain, 1—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 1—cholera infantum, 1—consumption, 15—convulsions, 3—croup, 4—diarrhœa, 2—diphtheria, 2—dropsy, 2—dysentery, 2—erysipelas, 1—exhaustion, 2—typhoid fever, 1—hæmoptysis, 1—disease of the heart, 2—homicide, 1—intemperance, 1—disease of the liver, 2—congestion of the lungs, 2—inflammation of the lungs, 7—marasmus, 3—neuralgia, 1—old age, 2—ophthalmia, 1—paralysis, 1—pleurisy, 1—puerperal disease, 1—rheumatism, 1—scrofula, 1—smallpox, 1—unknown, 2.

Under 5 years of age, 25—between 5 and 20 years, 6—between 20 and 40 years, 25—between 40 and 60 years, 10—above 60 years, 12. Born in the United States, 51—Ireland, 25—other places, 2.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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THE MEDICAL MANAGEMENT OF INSANE WOMEN.

By Horatio Robinson Storer, M.D., of Boston, Surgeon to the New England Hospital for Women.

[Communicated for the Boston Medical and Surgical Journal.]

III.—Confirmation, by an Ex-Superintendent of one of the New England Asylums, of the Views already advanced.

In my previous communications upon the causation, prevention and treatment of insanity in women (this Journal, April 7th and Oct. 13th), I propounded the theory that a frequent and efficient agent in inducing, aggravating or predisposing to mental disturbance in women was to be found in functional or organic uterine or ovarian disease—the symptom referred to being, therefore, of reflex or secondary origin. The position assumed was supported by arguments drawn from analogies of various kinds, from clinical observation, and by an appeal to the experience of every candid and unbiassed practitioner of medicine. I then proceeded, as a part merely of the systematic investigation I had marked out for myself, to point out some of the facts pertaining to the public management of insane women. It was shown that, because the due importance of the points I have indicated had never been properly estimated, if indeed suspected, and while I acknowledged with pleasure the general excellent management of our public institutions for the insane, and the general competence of their superintendents for the important duties entrusted to them, there had as yet been little undertaken or accomplished at our public hospitals for the cure of insane women. The question was here one simply of fact, and I reduced its answer to a matter of very simple though threefold proof.

1. Superintendents, not recognizing the frequency of the cause alluded to, had, therefore, neither reason nor justification for making such investigations as can alone decide a rigid diagnosis or suggest a rational treatment; that they did not recognize the causation, being shown by the current psychological literature of the day, by the sta-

tistical tables of asylums, and by the admissions of gentlemen themselves.

2. Superintendents did not make such examinations as could alone decide these cases; a point that I also proved by the testimony so freely given me by our brethren in charge of these establishments.

3. Superintendents could not, even had they desired, study or treat their female patients as fully as might be required by the exigencies of each particular case, for cogent and sufficient reasons which I fully explained.

It was also demonstrated, that for these and other causes, as, for instance, that only a skilled and very practised touch can safely discriminate between the varied local derangements to which women are liable, there were often occasions on which a little advice from outside its walls would be for the benefit of the hospital, its patients, the superintendent, the profession and the community, and I stated that it was only surprising, as has been remarked to me by many gentlemen since the publication of those papers, that the change suggested had not long since been made.

From these premises, plain and simple as they are, I showed that there could be but a single inevitable conclusion, that advisory medical boards, to be consulted at the discretion of the superintendent, are required at insane asylums, for the cases of insane women. The question is so plain and reasonable a one, so utterly a matter of common sense, that I anticipated the necessity of no further argument concerning it.

In this, however, I have been mistaken. I endeavored to express myself so plainly that there could be no possible misconception of my views, and should be sorry indeed if in a matter of such scientific interest and of such practical moment, in so far as it affects the possible cure of the majority of insane women, there were reason to believe that the drift of my argument has been intentionally misrepresented.

Be this as it may, an article has appeared (this JOURNAL, Nov. 10th) since the publication of my last paper, purporting to be merely a stricture upon the suggestion of advisory boards at asylums, but containing various personalities, expressed or implied, all, however, of but little account, and receiving its only weight and value as an apparent answer to my remarks, from the fact that the writer, though pusillanimously concealing his name, yet lays claim to authority as an ex-hospital assistant and superintendent. Upon general principles, as applying to the anonymous character of the attack, I should have considered that the article referred to was unworthy my notice; but as it contains within itself intrinsic confirmation of the truth of all the views I have advanced, I shall not hesitate to use it for the purpose now indicated, with so far my thanks to its author.

A word, and a word only, as to our critic's identity. There are but one or two gentlemen in New England who are in the position by him claimed, as past head of an asylum, and but one, who in addition to this, has been past assistant also; a fact, that, had there been any doubt concerning it, could easily have been ascertained from papers in my possession giving the whole professional history, past and subsequent, of every medical officer ever attached to a New England hospital for the insane as superintendent, and of nearly every one who had ever been assistant physician. For these details, hardly to have been procured from any other quarter, as for much other valuable information from time to time rendered me in questions pertaining to insanity and the treatment of the insane, I am indebted to my esteemed friend, Dr. Edward Jarvis, of Dorchester. The article thus contains within itself such intrinsic evidence of its source, that it is only surprising that any man valuing his own reputation should be willing to incur, by donning so transparent a mask, the direct and inevitable suspicion pertaining to an anonymous assailant, of backbiting and cowardice.

The article was permitted to occupy the leading place in the week's issue of the JOURNAL. For this reason one further word, otherwise unnecessary, may be permitted me without the imputation of undue warmth.

The signature of our friend was that of a star. Of heavenly bodies, the moon is that which has always been supposed the peculiar perquisite of the psychologist, and if any sign manual were intended to be typical of the light to be thrown by such upon the subject under discussion, this would have seemed more to the purpose than that actually employed. It is possible, however, that the use of the star may, under all the circumstances, have been singularly an appropriate one; for this supposition there being several reasons, either one, or indeed all, of which may be thought applicable. Representing himself by a lesser luminary than his fellow-workers would have been likely to have done, the critic may have desired modestly to express his own sense of comparative insignificance; or it may be that he had the malign dog-star in mind; or it is possible that in Lucifer, thrust from his high estate, he would typify the fact, with all its probabilities, that he is an ex-superintendent, now no longer in office. It is hardly so likely that he intended to show that his argument, so all-annihilating at first sight, would be found, like the siderial portents of old, to mean in reality little or nothing, or that, comet-like, it retreated with all its fiery fervor to the place from whence it came, there to deal destruction; or that he wished it to be seen that with far more reason than are the stelligers of the Academy, he is but the veriest shadow of a shade, dead to progress, dead to research, dead to duty, dead to reason.

I have said that the result of the efforts made by this Georgian Sidus has really been in confirmation of the views I have advanced. I now proceed to show the truth of this assertion.

I. As regards the theory that insanity in women very frequently is of reflex and secondary origin, and from *causæ causantes* peculiar to the female sex.

This, the main point, to which the suggestion of advisory boards is wholly subordinate, though legitimately consequent, our writer has left entirely untouched, saying not a single word, either in doubt, in disapproval, or in disproof. Such silence, under such circumstances, is very significant—the more so when it is recollected that at the close of my paper of April 7th, as again in that of Oct. 13th, I made use of the following language: "These several points I commend to the close scrutiny, confirmatory or contradictory, both of the profession at large and of the specialty devoted to the study of the insane. I think I am already sure of the support of the latter; I have little doubt that the former also will, upon investigation, as heartily acquiesce in the acceptance and general adoption of my formulæ"; and again: "The above remarks are commended alike to the attention of superintendents, of trustees and of the profession at large." So far as I am aware, since the publication of my doctrines, not one word has been written in their disapproval by any gentleman, whether charged or not charged with the management of the insane. It cannot be from the insignificance of the subject under discussion, for it lies at the foundation of the whole question of insanity in women, and indeed, if we are to accept the forcible arguments of Dr. Ray, at the foundation, by inheritance, of a large portion of the insanity of men, their children. It cannot be from the quarter whence these views have proceeded, for that quarter represents not one individual's opinion merely, but the whole experience of all the great obstetrical authorities of the day, in this instance perhaps so feebly and so imperfectly represented. It is not the channel through which argument and conclusive proof are collected and made to pour that is to be considered in a matter like this, but it is the torrent itself, which will carry with it the minds of all reasonable men, and will submerge, as here, every such puny obstacle as that we are now considering.

I have therefore a right, in default of an answer to the arguments that I have advanced, and until such shall be given, to consider them unanswerable; and a right also, when an opportunity to present such an answer has been taken, and yet wholly unimproved, by a person claiming to be familiar with all pertaining to the nature and treatment of insanity, to consider his silence a tacit admission that my views are correct. Such, therefore, I allege.

II. As regards my statement, these premises being admitted, that women were not and could not, as asylums are at present organized, be treated thereat "as understandingly, as judiciously and as thoroughly as the same women would be treated were they sane and at their homes."

The only answer that can be made to such allegations as these, supported as they were by much positive evidence, alike of an intrinsic character, from facts on record, and from the admission of superintendents themselves, whose names were given, and who are acknowledged to stand at the head of their profession, would be counter-evidence, also extensive and of as positive a character. Nothing of the sort, however, has been presented; simply a statement that the admissions of the gentlemen to whom I have referred, are "conclusive of a lack of disposition on their part to make use of all the means of treatment in their power." That this assumption is unfounded, I think my previous communications have clearly shown; that it is insulting to the gentlemen to whom it alludes, is very evident. The charge is one for its author to settle with the superintendents whom he has thus attacked.

III. The imaginary objections he has urged against an advisory board are only those that apply with equal force to the consulting physicians and surgeons at general hospitals, whom few would deny to be occasionally an advantage both to these institutions and to their patients. As here made, directly or by implication, it will be perceived that the contradictory character of these objections is very remarkable. It is alleged—

1. That advisory boards (and it will be recollected that I suggested them only with reference to the cases of female patients, and only to be consulted at the discretion of the superintendent) would be positive, and add uselessly to the machinery already existing.
2. That they would be negative, and therefore not add at all to that machinery.
3. That they would accomplish nothing, on the additional ground that superintendents may already consult the gentlemen who would be likely to be appointed.
4. That they would accomplish too much, on the supposition that superintendents could consult no one else.
5. That they would practically compel superintendents to consult in many cases where they did not desire to do so.
6. That they would practically prevent superintendents from consulting in any case, even if they did desire.
7. That by adding to his manifold cares, they would be an increase of the already too onerous burdens of the medical superintendent.
8. That they would be an infringement (and here peeps out the animus of the whole article), or a covert attempt at infringement of the superintendent's present high prerogatives, of chief steward, chief farmer, chief hostler, chief policeman, chief cook, chief valet de chambre and—physician.

In my paper upon the advantages of an advisory board, I referred to the publicly expressed and favorable opinions of several superintendents of asylums, at present in office. As none of the gentlemen referred to have since in any way given intimation of a change of sentiment, their views may be thought to outweigh the fanciful assumptions expressed above. It will be found, indeed, that these were all answered by anticipation, fully, fairly and faithfully, in my own previous communication. I therein allowed that such objections might possibly be urged, but proceeded to show that they would prove unfounded. Their mere reiteration, without show of proof, makes but a sorry and shallow argument.

If the insanity of women ever depends upon local and reflex irritation, the possible existence of this must always be borne in mind, very often suspected, frequently searched for, and, whenever found to be present, very constantly attempted to be cured. No man can probably be found who is careless enough or ignorant enough to directly deny these premises; no man can refuse to allow their necessary conclusion, without exposing himself to suspicion of one of the alternatives I have just implied.

The assertion that an advisory board would not only be of no benefit to patients, but do them a positive harm, I have already shown to be groundless as applying to the case of women. The question, and I stated it thus broadly, is simply one of common sense. Hospitals receive female patients, the number at present therein resident generally equalling, if it does not exceed, that of males; they are taken, not for detention, but for cure; for the cure of disease, it must be both diagnosticated and treated; in the case of women, none of the usual measures for these ends are resorted to at insane asylums, nor can it be done as they are at present organized. As superintendents themselves acknowledge these facts, a thousand constellations of airy nothings would fill not an atom of space in rebuttal.

I have shown, I trust, that my positions have been strengthened rather than harmed by the article in the Journal of Nov. 10th. If my views still seem obscure or improbable to the minds of any, I can only ask a kindly re-perusal of my previous communications. It is possible that I may again refer to this subject in the report which it is my duty to prepare, as Chairman of the Committee on Insanity, for the American Medical Association. As yet I must consider my arguments unanswered, and that as regards the medical treatment of female patients at asylums, the advisory board has been shown likely to be beneficial, equally as concerns the patients, the hospital, the superintendent, the profession and the community.

Were the personalities of the article now under review confined merely to myself, I should say no more. I have shown that they have also been cast upon the leading superintendents of our Massachusetts asylums, and have repelled them with far less warmth than these gentlemen must feel.

Bitterer insinuations than these, however, have been made; I shall now point out how unjustifiably.

"The advisory board," says the little twinkling star, "might be appointed for political reasons. It might not. But by what influence was the late Board of Commissioners on Insanity selected?" &c. &c. Herein is a direct implication that the body referred to was a packed commission, improperly appointed. Next follows the charge that it was improperly constituted, and then, "without any wish to intimate," &c. &c., the profession are told that "it is sufficient to say" that practically neither of the gentlemen upon that Commission, inasmuch as they were not hospital superintendents, could possibly have known anything of "the difficult and complicated subject of insanity;" in a word, that they were utterly incompetent for the high trust confided to them by the State.

With regard to the personal attack upon my colleagues, Hon. Josiah Quincy, of Boston, and Dr. Hitchcock, of Fitchburg, it might have been thought that the many public services they have rendered and the position they both hold in private life would have protected them from such ungenerous treatment.

As regards the Commission collectively:—

1. The appointment of the Commission on Insanity was made by the Governor and Council. The charge upon this point has therefore been transferred to these gentlemen, and is an assertion that they were false to their duty and to their oaths.

2. The Commission would hardly have been properly constituted had it been composed merely of superintendents, for with the many questions that came before it in various ways affecting that fraternity, all of which it is to be hoped were fairly and impartially decided, how could they have given a report that would not have been thought biassed?

3. In view of the double character of the questions submitted, it was necessary that the Commission should have been chosen from the two professions it represented. Was it unfair that it should have been constituted by one lawyer to two physicians?

4. Regarding the incompetence of the Commission, its report may be allowed to testify.* It is possible that the practical results therein given may be evidence to the point: the rescue of one third of all the insane in the State, who had been utterly unprotected and forgotten, from their miserable incarceration in the towns' almshouses, where some of them were still caged like wild beasts; the measures advised in the report, and in consequence partially adopted, concerning the criminal insane, the inebriate, and those exposed to the possible dangers of private asylums, &c. &c.; perhaps, also, the investigation there initiated, regarding the causation of insanity in women.

The fact that the Commission, in its anxiety thoroughly and competently to do its work, gave its time without stint, though with never an offer of compensation, and money from its own pockets to the extent of several hundred dollars, to meet travelling expenses in visiting asylums in seven other States,† and in both the Canadas, also without repayment or offer of repayment by the Commonwealth, is hardly worthy mention, save as proving a novel sort of unfaithfulness to its public duties on the part of the Commission, and a novel sort of incompetence to accomplish its work.

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* Senate Document, 1864, No. 72.

† Maine, New Hampshire, Rhode Island, New York, Ohio, Indiana and Michigan.

That I might speak with the more certainty upon these points, I have addressed a few pointed inquiries to the five superintendents of the public and State Asylums for the Insane, with whom the members of the Commission were officially brought into contact, namely, Drs. Tyler, Choate, Bemis, Prince and Walker. The replies that have been received from these gentlemen are equally courteous and straightforward in their tone, and of precisely the same character as uniformly marked the reception and treatment of the Commission by the superintendents, the more to be noted from the fact that rumors adverse to the Commission had been freely circulated previous to its appointment and during its continuance, and that the recommendations made in its report were not all of them fully and unanimously endorsed by the superintendents.

As evidence of the opinion of these gentlemen regarding the points upon which our ex-superintendent has so forcibly animadverted, I shall quote from a single one of the letters in my possession. It is from the able Superintendent of the State Asylum at Worcester, Dr. Bemis.

"THE WORCESTER LUNATIC HOSPITAL,
Worcester, Mass., Nov., 1864.

"H. R. STORER, M.D.

"My dear Sir,—Your note propounding certain questions relative to the working of the Commission of Lunacy was duly received, and it is now answered without hesitation or reservation.

"1st. I believe that all the duties pertaining to the Commission were faithfully and impartially performed.

"2d. It was every way wiser that superintendents of lunatic hospitals should *not* be made members of the Commission.

"3d. It was most fit and proper that there should be in the Commission a member of the legal profession.

"4th. The members of the Commission, individually and collectively, seemed to sympathize with me in all the duties and trials pertaining to my office; more than I could have expected.

"5th. I only desired the Commission to see all and to know all pertaining to this Hospital. I was anxious that they should visit the institution more frequently and remain in it longer.

"I was in favor of the establishment of the Commission, and am now fully and thoroughly committed to the establishment of a permanent Commission of Lunacy, similar in its character and conduct to the one of which you were a member.

"Yours very truly, M. BEMIS."

5. There is but one other point to which I will reply, alike the last and the least of the charges made against the Commission.

I will merely state, that so far from its being a great delusion for either of the Commission to have supposed for a moment that he could have secured the countenance and support of a single member of the intelligent Board who had the power of appointment" at Northampton, one of these gentlemen, whose name had been submitted to that Board without his knowledge, did receive by a Committee from a majority of the Board an informal tender of the superintendency; which invitation was declined.

As I happen to have in my possession positive evidence of the truth of this assertion, it shall be submitted to the inspection of the gentleman who has so kindly offered his views upon the subject, whenever he will do me the honor to call upon me.

I have now replied to the ex-superintendent, using not similar weapons, but merely his own; and trust that it has been shown that the positions that I have taken concerning the causation and treatment of insanity in women have in no ways been controverted.

It would seem from the whole pointless tenor and contradictory assertions of the article we have been considering, that the danger so well described by Dr. Ray in his "Mental Hygiene," had been fully realized in the case of our ex-official. Such intimate association with the insane during a space of time long continued is thought at times to induce a tinge of their own malady. It is possible that a consciousness of this fact may have occasioned the gentleman's withdrawal from active duty. However that may be, it will have been made evident, from his own admissions, that he could hardly have been fitted for the moral treatment, as he was certainly unfitted for the physical treatment of insane women. The very inaccuracies of thought and of expression and of statement which he has evinced, the reckless way in which by his allusions to the opinions and conduct of his brother-superintendents he has scattered firebrands within his own household, are in themselves sufficient answer to the intolerant and intolerable attempt to withhold from all save the little circle of hospital experts the privilege of knowing or of stating anything concerning insanity. The time has passed for such an assumption as this; it would probably not be made by another physician in the country; and there is good reason for believing that the new door now opened by gynæcologists for reaching, analogically and from their other diseases, insanity in women, none will more gladly acknowledge and more faithfully employ than superintendents themselves.

MALIGNANT DISEASE OF THE UTERUS.

[Communicated for the Boston Medical and Surgical Journal.]

A MARRIED woman, aged 27, apparently enjoying good health, of medium size, fair complexion and lymphatic temperament, without hereditary predisposition to cancerous or malignant disease—mother of two healthy children, and supposed to be between the third and fourth month of her third pregnancy—was attacked suddenly with a profuse uterine hæmorrhage. Her family physician informed me that no circumstance connected with either her general health or labors previously could have led him to anticipate such an event. He was requested to see her Nov. 13th, 1863, the date of the first hæmorrhage. Uterine pain and expulsive efforts accompanied the hæmorrhage, and he supposed that she was about to abort. This state continued, with either less or more pain and hæmorrhage, until the 28th, when what he supposed to be a mole was expelled, which nearly filled a chamber-pot. The flowing ceased, and he considered all things would go on well.

Dec. 14th, he was again summoned in consequence of hæmorrhage. He attended the case, with varying success, until Jan. 2d, 1864, when she was seized with profuse flowing whilst straining at stool. My presence was then requested. On my arrival, I found her almost pulselsss, with the aspect of a corpse. The usual restoratives were applied. She seemed to revive sufficiently to allow a vaginal examination. The vagina was relaxed, with a few coagula in it; the os dilated, readily admitting two fingers. About half an inch from its edge I felt a nodulated hard growth, with a few fissures through it, giving an impression of being the size of half a hen's egg, oval in shape. I passed the finger around the base to ascertain if any part was movable; it was firmly adherent, and the surface continuous with the uterus. Hæmorrhage was not induced by, or followed the examination; no induration or change of structure was detected. The uterus contracted upon the fingers. The hæmorrhages ceased, but there was discharged, in large quantity, a serous or watery fluid, very offensive.

She lingered for a week in this condition. There were no febrile or inflammatory symptoms. Her death seemed due to the exhaustion following the repeated and large hæmorrhages. The state I found her in, and at any time subsequent to my first visit, forbade any serious operation. A further obstacle to successful treatment was encountered in the state of the stomach, which was intolerant of everything recommended, except tea or cold water.

I regret that all our efforts to obtain a *post-mortem* examination were unsuccessful. The feeling of dislike to such examinations prevails amongst a certain class strongly. If such was more general, the true path of rational medicine might be said to be closed. The history of this case, from all the details furnished, adds still further evidence in favor of the remark made by Prof. Simpson, of Edinburgh, "that hæmorrhage is often the first circumstance which attracts the patient's notice in malignant disease of the uterus."

It may be useful to observe, in connection with this case, that the presence of such a serious disease was not discovered until within a week of the woman's death. It will serve, in addition, to justify the advice of Lebert, who recommends a vaginal examination in every case in which a considerable quantity of blood is discharged. He has known organized vascular substances treated as menorrhagia; and few physicians who are much employed in treating diseases of women but will confirm this statement. I removed a polypus about two years ago from a middle-aged woman. She stated that for two years repeated attacks of uterine hæmorrhage occurred, but always was told that it was owing to change of life. When I visited her, she was so much debilitated as to be obliged to remain in bed. No vaginal examination had ever been proposed in her case. After the removal of the polypus, she recovered her health and strength; she resides in my neighborhood, and has never had any hæmorrhage since.

Of the importance of making a careful examination, much might be said, and also upon the necessity of examining the placenta after its removal from the vagina. That the placenta is more frequently removed than expelled, accords with my experience, and probably with that of others. Neither is it unlikely that in some instances a fragment of it may remain and become the nucleus of a disease which may prove fatal at some future period. In Dr. Montgomery's museum, in Dublin, there is a specimen of a degenerated placenta; its spongy structure is replaced by tubercular projections. The case was one of fleshy mole, which was connected with the uterus by the degenerated placenta. The woman died in consequence of repeated and exhausting hæmorrhages. JOSEPH MURPHY.

Taunton, Oct. 28th, 1864.

LIGATURE OF THE COMMON CAROTID ARTERY.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—I have the honor to report the following case of ligation of the common carotid artery.

Private John Plaskett, of the 120th N. Y. Vols., was admitted to hospital Sept. 9th, 1864, having received a gun-shot wound of the face and neck, the ball entering just behind the sterno-cleido mastoideus muscle, and about one inch below the level of the thyroid cartilage, cutting in its way some fibres of the muscle and making its exit just below the left eye. The ball, in its passage, cut an opening in the roof of the mouth one and a half inches in length and about three fourths of an inch in breadth. There was severe arterial hæmorrhage from the anterior and posterior nares, from the wound in the roof of the mouth, and from the wound below the left eye. I proceeded immediately to plug the several passages with lint saturated with the liquid persulphate of iron, but could not by this means control the hæmorrhage. Chloroform was administered, and I immediately proceeded to ligate the artery. There was nothing unusual in the mode of operation, and the artery was ligated just below the bifurcation. After the ligature was carried beneath the artery, I allowed the patient a few moments to recover from the effects of the anæsthetic, and after he had partially rallied I tied the artery. He became comatose immediately, but soon rallied on applying ar. spts. ammonia freely to the face. On rallying, his pulse was 100 per minute.

The three succeeding days his pulse was 120. The reaction was very severe, but during all this time he maintained his mental faculties. After the third day the reaction grew less, until, on the twelfth day, his pulse numbered only 72. On the sixteenth day the ligature came away; the incision for securing the artery was very nearly closed, and the wounds made by the ball were doing remarkably well.

Oct. 6th, twenty-six days after the operation, he writes me that he has nearly recovered from the effects of the wound and the operation. Yours very truly, WM. B. REYNOLDS,

Surgeon 2d U. S. Sharpshooters.

AN INCIDENT IN ARMY PRACTICE.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—The subject of the following remarks was a negress of about thirty years, small in stature, and at the period alluded to was a laundress at the Post Hospital, New Iberia, La., where I was, at the time specified, on duty.

On the morning of the 8th December, 1863, her room-mate came to me and said Lizzie was very sick and wanted to see me. I accordingly visited her and found that labor was about to take place, she having gone but seven months. She continued in pain at intervals until evening, when I found it necessary to resort to means to dilate the os, which was very rigid. At about midnight, the rigidity having succumbed to treatment, she was delivered of *twins*, each about 12 inches in length; respiration was established, and they lived about half an hour. The peculiarity in the infants was this: the one was of the finest features, perfectly white, and would have done honor to an American mother; while the other was of the true African build, black as ebony, enormously thick lips, curly hair or wool, and O! such long heels!

Perhaps it would be well to state, that each child had its placenta and accompanying envelope.

It seems to me that this case proves that two pregnancies may occur together, which some, I believe, have doubted.

ISAAC SMITH, JR., M.D.,
Late Asst. Surg. 26th Mass.

HINTS RESPECTING THE EXTRACTION OF FOREIGN BODIES FROM THE EAR AND NOSE.

By S. D. Gross, M.D., Professor of Surgery in the Jefferson Medical College of Philadelphia.

All writers upon the diseases of the ear speak of the great difficulty that is generally experienced in removing foreign bodies from the auditory tube. Von Tröltsch, whose work has recently been reproduced in this country, and whose sentiments may be regarded as expressive of the latest views upon the subject in Germany, has uttered this remarkable sentence: "Generally the presence of these bodies in the ear is less injurious than the attempts to remove them." This language, written a little more than a year ago, is full of significance. It clearly shows how incompetent medical men generally are to perform so trifling an operation. Proceeding a little further on, the reader of Von Tröltsch's work meets with another curious sentence. "If," says he, after alluding to the swollen condition of the ear, and the impossibility of dislodging the intruder with the syringe, "a case came under my observation where an impacted body produced such symptoms as to indicate an energetic mode of treatment for its removal, and delay was not practicable, I should hasten to extract it by an operation, by making an opening through the wall of the meatus, so as to admit of its being approached and seized from behind." In speaking of the difficulties of such a procedure, he adds: "I have, however, satisfied myself on the dead body that it is easy to separate the auditory tube from the squamous portion of the temporal bone, and thus with a curved aneurism needle reach the membrane of the tympanum. The operation is doubly easy in children in whom there is hardly any bony canal." The means which Von Tröltsch recommends in ordinary cases for effecting dislodgment of foreign bodies are Daviel's curette and injections of water.

"Rude efforts," says Mr. Wilde, "made to extract foreign bodies from the ear are as likely to cause mischief as these bodies themselves." The means which he advises for accomplishing the object are the syringe, curette, spatula, and toothed forceps.

Mr. Toynbee, no mean authority upon any subject relating to the diseases of the ear, in speaking of extraneous substances in this organ, remarks: "Cases are sometimes met with in which the most lamentable results have followed attempts at removing foreign bodies by instruments. Death itself has not infrequently happened; and where the life of the patient has been spared, the ear has sometimes been destroyed and the portio dura nerve paralyzed." The syringe and tepid water are the means upon which Mr. Toynbee chiefly relies for the removal of all rounded solid substances. For the extraction of wool, cotton, paper, rags, and other soft material, he employs, when injections fail, a pair of lever-ring forceps, an instrument of his own invention.

The above passages, representing the views of three of the most distinguished aurists of the present day, are quoted for the purpose of showing the most approved methods of extracting foreign bodies from the ear, and the violence that is often inflicted in rude attempts of this kind. From the fact that the works of these authors, especially those of Wilde and Toynbee, have been widely circulated in this country, it may fairly be assumed that the practice inculcated in them is the one generally pursued by our medical men. Not long ago I read, in the report of a discussion before a learned body in a neighboring city, that the best instrument for extracting a foreign substance from the auditory canal was an ordinary pocket probe bent at the extremity; and, as the remark was made by a distinguished professor, I take it for granted that he is not the only surgeon in this country who thinks so.

For a number of years past, I have entirely limited myself, in the extraction of foreign bodies from the ear, to the little instrument originally described in my System of Surgery, and now regularly put up in all the ordinary pocket cases manufactured in this city. Composed of steel, and therefore entirely inflexible, it is about five inches and a quarter in length, very light and delicate, cylindrical and somewhat rough at the middle, to afford a good hold for the thumb and fingers, spoon-shaped at one extremity, and furnished with a little tooth or prong at the other. This tooth, which projects at a right angle from the shank of the instrument, is exceedingly small, and therefore admits of easy insinuation between the foreign substance and the auditory canal. The curette or spoon is also very delicate, and bent considerably more than the ordinary cataract curette. Provided with such a contrivance as this, no surgeon, however unskilful or inexperienced, can possibly fail in his object.

The plan which I always adopt, when a case of foreign body in the ear is brought under my notice, is to place the patient in an easy recumbent position, with the head slightly raised upon a pillow, and to administer chloroform to the extent of entire obliviousness. This is absolutely necessary when the patient is a child, or a nervous, excitable adult. The operation is greatly facilitated if there is a clear light, although this is by no means indispensable. Taking hold of the upper and back part of the concha, and pulling it gently so as to efface the curve at the entrance of the ear, I carefully pass the narrow extremity of the pick sidewise between the intruder and the wall of the meatus, and bringing the little tooth or prong behind it, I readily jerk it out, no matter how deeply it is buried, by a kind of lever movement with the handle of the instrument. The operation is generally the work of a few seconds, and is altogether free from hæmorrhage. No possible injury can be inflicted upon the meatus, much less upon the membrane of the tympanum, if proper caution is used in the management of the pick. In this manner I have extracted quite a number of substances of various kinds, as pieces of slate pencil, grains of corn, beads, pebbles, and cherry-stones, in most cases after vain attempts at relief had been made by other practitioners. When the substance is very small, the object is sometimes most readily attained by the use of the curette, but in general the prong is altogether preferable, whatever may be the form, size, or consistence of the body, whether round or angular, small or large, hard or soft. A pebble, grain of coffee, bug, or pellet of paper, wool, or cotton, may all be equally easily extracted. Ear-wax, however hard, or however firmly impacted, is more readily removed with such an instrument than with any other contrivance of which I have any knowledge.

Insects may, in general, be readily dislodged by filling the ear with water or oil, which has the effect of suffocating them. When they are dead, they may be promptly extracted in the same manner as any other extraneous matter.

There are certain rules to be observed in the extraction of foreign bodies, no matter what means may be employed for the purpose. In the first place, the surgeon should be perfectly satisfied that there really is an extraneous substance in the ear; or, in other words, that the patient is not laboring under a false alarm. Such an occurrence is by no means uncommon, especially when the individual is a nervous, excitable female, impressed with an idea that a bug has passed into the ear, or that the head of a pin has fallen into it. A careful inspection with a good light, either solar or artificial, will be the safest guarantee against any error of this kind.

Secondly. The meatus should never be meddled with when, in consequence of previous efforts at extrusion, it has become severely inflamed and more or less swollen. Here the proper plan is to wait until, by leeches to the inside of the tube, active purgation, light diet, and other measures, the morbid action is sufficiently subdued to admit of the requisite manipulation. The want of this precaution has sometimes led to violent inflammation, seriously imperilling life. The ear, if let alone, is generally remarkably tolerant of foreign bodies, even when rough or of large size. Not long ago I removed, at the clinic of the Jefferson Medical College, a large cherry-stone, which had been lodged deep in the meatus of a little girl for seven years, without any other inconvenience than slight occasional dizziness.

Thirdly. The foreign body is sometimes concealed by blood, pus, or cerumen, thus necessitating the use of the syringe and tepid water, before an attempt is made at extrusion.

Fourthly. The after-treatment should be conducted upon general antiphlogistic principles. Ordinarily, little, if anything, is required. It is only when the parts have been rudely handled that active measures will be needed, and even then the case will usually yield to a brisk purgative and the application of a few leeches to the meatus, along with a few doses of Dover's powder. Should the brain be threatened, blood must be freely taken from the arm. The syringe with tepid water, simple or medicated, will be required if there is any considerable discharge of matter, especially if it is offensive and irritating.

I do not wish to be understood, from what precedes, to say that I disapprove of the syringe for the removal of foreign bodies from the ear. The operation, if properly performed, is frequently crowned with success; but it is often tedious, always disagreeable, and sometimes wholly inadequate. Wool, cotton, paper, cloth, and similar articles, may often be easily and successfully removed with the forceps. As to the pocket probe, bent at the point, no one who knows anything of the nature of such an operation would ever think of employing it. The idea of separating the auditory canal from the squamous portion of the temporal bone, with a view of obtaining access to the extraneous substance, as suggested by Van Tröltsch, is so absurd that it ought to be ranked among the exploded notions of the barbarous ages.

The removal of foreign bodies from the *nose* is usually, in the hands of the general practitioner, an operation of great difficulty: quite as much so, indeed, as the withdrawal of an extraneous substance from the ear. The efforts that are made to accomplish the object are commonly of the most misdirected and herculean character; the struggles of the patient, ordinarily a child a few years old, are violent, if not uncontrollable, and the result too often is a bloody, fruitless battle, not less distressing to the parents than discreditable to the surgeon. This is not an exaggerated picture. A practice of upwards of a third of a century has afforded me many unfortunate illustrations of its truthfulness; and yet the operation, if properly performed, is one of the most easy and simple in surgery. As commonly executed, its effect is, not extrusion of the foreign body, but its further and deeper impaction in the nose. The instruments generally employed are the forceps, a grooved director, or a probe bent at the extremity. Need we be surprised that frequent failure should be the result under such circumstances? The extraction of an extraneous substance with such contrivances is altogether a blind procedure. The surgeon who succeeds with them deserves great credit for his good luck; for, really, it amounts to nothing else.

My practice in these cases is simply this. In the first place, the child must be properly secured. If he is very strong and rebellious, he should be wrapped up in a sheet or apron, to prevent him from using his hands and feet. Chloroform is seldom necessary. The head, inclined slightly backwards, should be immovably fixed by an assistant, while another assistant holds the patient upon his lap. The small extremity of the " ear pick " is then carried flatwise upwards into the nose in the direction of the bridge, until it is fairly beyond the foreign body, when, the point being depressed, the little hook or tooth is at once brought in contact with the substance, and extrusion effected by a kind of jerking or wriggling movement of the thumb and fingers. The operation is generally over in a few seconds.

Trouble can arise only when the substance, in consequence of previous abortive efforts, has been pushed back into the nose, or when, as occasionally happens, the nostril is filled with blood. I have myself never encountered the slightest difficulty with the instrument in question, and believe that failure in any case is impossible, if it is judiciously used.

Practitioners generally do not seem to be aware that foreign substances in the nose are commonly situated very superficially. In most cases, they occupy the entrance of the nostril, resting against the anterior extremity of the inferior turbinated bone, or between this bone and the nasal septum. It is seldom that they are pushed by the child into either of the chambers of the nose, even when they are of small size. If rude and protracted attempts, however, have been made at extraction, the probability is that the body will be found upon the floor of the nostril, or firmly wedged in between the turbinated bone and the nasal septum. In such an event, the operation will be more difficult, but still perfectly feasible. In a case under my charge not long ago, the substance, a small bean, had been pushed far back into the inferior meatus, and I was in doubt, for a few moments, whether it could be reached. Keeping the point of the instrument in close contact with the surface of the turbinated bone, I soon succeeded in passing it beyond the extraneous body, which was then extracted with the greatest facility.

As foreign bodies in the nose are invariably productive of more or less irritation and fetid discharge, they should always be extracted as speedily as possible. In a case reported by Dr. Hays, the able editor of this journal, the substance, a glass button, kept up incessant inflammation and suppuration for upwards of twenty years. Its extraction was followed by a speedy cure. Whenever a young child is brought to a surgeon with a fetid discharge from the nose, especially on one side, a careful search should be made for the presence of an extraneous substance. A few months ago, a stout, fat child, twenty-one months old, came under my observation on account of a very profuse and offensive profluvium from one of its nostrils. Suspecting the existence of a foreign body, I carefully explored the affected cavity with my instrument, and, much to the surprise of the mother, brought out a large paper pellet.—*American Journal of the Medical Sciences.*

Prolapsus of the Rectum in Children.—With adults the excision of some of the anal folds or of a portion of the prolapsed mucous membrane may be of use; but M. Guersant, of Paris, has found that the actual cautery lightly applied round the anus in children was very successful. He burns four points close to the orifice in a square, one just by the coccyx, one opposite that process in front, and two others on either side. The action should reach as far as the sphincter; simple cold water dressing is employed afterwards, and some of the little patients have recovered in a few days.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, NOVEMBER 24, 1864.

A Sister of Mercy.—Among the many sad and beautiful deaths which have hallowed this war, not one has made a deeper impression upon us than that so worthily recorded below. The brave soldier fills up his short career with gallant deeds, and his memory is kept bright by the glory of the victory he died to win. We sing such praises of him as those well deserve who fight for their country, and history gives him place among her heroes. Such brilliant lives and such rewards are not for those of us, however, who have gone into the field and have fallen in the same good cause; we renounce all such ambition when we take the vow of fidelity to the spirit of our art. Such, too, must be the self-renunciation of all who in any way labor with us in the same cause, and such we know was the motive which drew this young lady from home to the hospital. To such women, and she was but one of many, the country owes a debt of gratitude it should not fail to acknowledge; for the voluntary sacrifices they make and the horrors they so heroically endure are perhaps even greater than those of the battle-field, and their services are beyond price. No nobler offering to patriotism has been made than this fair young life thus laid down, and certainly none which we can more fittingly honor.

The following letter, addressed to one of our daily journals, is a faithful tribute to her character, and we desire that her name should be remembered by every member of a profession the highest ideal of which she so beautifully typified.

U. S. General Hospital, Beverly, N. J.,
November 16, 1864.

The military or naval hero in these times, who, falling in the defence of his country, has "fought his last fight, and won his last battle," scarce ever fails to receive at least a brief notice in the papers from some admiring friend, recounting his gallant exploits, his noble traits of character, &c. All this is meet and proper. But there is in our army a class of heroes, or rather heroines, who quietly and unheralded go forth from their homes and bravely face the horrors of the battle-field, and disease and death in the pestilential atmosphere of the wards of hospitals. To this class belonged Miss Martha Sever, of Boston, who died at this hospital on the night of the 13th November.

Young, beautiful and accomplished, reared in a comfortable home, surrounded by every luxury which wealth could procure or a refined taste could wish for, of an ardent and sanguine temperament, enthusiastic beyond measure in behalf of the sufferers in our military hospitals, her pure, exalted and irreproachable patriotism prompted her to offer her young and precious life a willing sacrifice in the cause of her country.

Coming to a hospital but recently established, and wholly unprepared for the reception of such as she, she entered upon her new and arduous duties with a zeal which, although highly commendable, proved in the end fatal to her. Her kind, genial and sympathizing nature won for her a host of friends among the patients, and her presence in the ward was as a sunbeam, a ray of light from home, as it were, to the dying soldier, recalling pleasing reminiscences of a sister or a loved one far away.

In performing her kind offices for her patients, all thought of self was overlooked, and against the earnest admonitions of more experienced friends she visited her wards early and late, and in that way contracted the disease which caused her death.

The announcement of this sad event in the ward to which she had been attached was received by all who knew and were endeared to her by her many virtues, with unfeigned sorrow; bearded men wept like children, and veteran soldiers of many battles tried in vain to check the ready tears which coursed down their bronzed and scarred faces, for the noble girl who had sacrificed herself for their sakes. It is useless to eulogize.

MEDICAL INTELLIGENCE.—Nearly sixty children were recently poisoned in Liverpool by eating Calabar beans. They were removed with rubbish from the hold of a vessel from the Calabar river, and thrown upon the ground. Two, three and four seems to have been the number generally eaten, and one child is said to have swallowed twelve, and yet recovered. One case only proved fatal, a little boy of 6 years. He had eaten six of the beans, and lived two hours only.

Prof. Virchow recently delivered a lecture to the mechanics of Berlin upon tobacco-smoking, in which he enlightened them as to the dangerous consequences of this practice, and came to the conclusion that a restriction upon the excessive smoking was positively necessary for the preservation of their health. He also opposed the very popular prejudice that smoking after table aids digestion.

Prof. Bärensprung, the well-known head of the clinic for skin diseases and syphilis in Berlin, and who was lately reported insane by us, was recently found drowned in the waters of Kiel. He had just finished a treatise upon hereditary syphilis, and the first part of his large work, "Die Hautkrankheiten," has been published but a year.

The Emperor Max. I., of Mexico, lately made a night visit, accompanied only by his physician, Dr. Semeleder, to the Hospital of St. Andrea. His Majesty was so little expected that he was obliged to wait half an hour before obtaining entrance.

WHY ANIMALS TO BE EATEN MUST BE KILLED.—It is universally understood that animals which die from disease are not fitted for our markets. It is also understood that when cattle have been overdriven, their meat is notably inferior to that of healthy animals, unless they are permitted to recover their exhausted energies before being slaughtered. Why is this? The first and most natural supposition respecting those which die from disease is that their flesh is tainted; but it has been found that prolonged agony or exhaustion is quite as injurious, though in these cases there is no taint of disease. M. Claude Bernard propounds the following explanation. In all healthy animals, no matter to what class they belong, or on what food they subsist, he finds a peculiar substance analogous to vegetable starch, existing in their tissues, and especially in their liver. This substance, *glycogéne* or liver-sugar, is abundant in proportion to the vigor and youth of the animal, and entirely disappears under the prolonged suffering of pain or disease. This disappearance is singularly rapid in fish, and is always observed in the spontaneous death of animals. But when the death is sudden, none of it disappears. In a rabbit, killed after suffering pain for five or six hours, no trace was found of the sugar-forming principle, and its flesh has a marked difference in flavor. The same remark applies to exhausted, over-driven animals; their muscles are nearly deficient in *glycogéne* and yield a decidedly larger percentage of water than muscle in normal condition. M. Bernard likewise finds that animals which are suffocated lose more of this sugar-forming substance than similar animals killed in the slaughter-house. To this let us add the fact, that the blood of over-driven animals will not coagulate, or coagulates very slowly and imperfectly; and we shall see good reason for exercising some circumspection over the practices of our meat-markets.—*Edinburgh Medical Journal.*

CAUTION TO CRITICS.—A novel action was lately brought in Paris, by a surgical mechanician, against two medical officers. The latter, Drs. Goupil and Bernurts, have published a book on the diseases of women, and therein stated that a peculiar pessary, invented by M. Grandcollot, did not, as far as they had seen, answer the purpose. The latter thereupon brought the action, laying the damages for the injury sustained at £1,000, requesting, besides, an apology in thirty newspapers, and also a rectification to be inserted in the above-mentioned work. He, however, lost his cause; the verdict was for the defendants, and the plaintiff was saddled with the costs.—*Lond. Lan.*

THE officers of the 19th Massachusetts Regiment have issued a card of thanks to their late excellent surgeon, Dr. J. Franklin Dyer.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, NOVEMBER 19th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	56	44	100
Ave. mortality of corresponding weeks for ten years, 1853—1863,	38.2	37.5	75.7
Average corrected to increased population - - - -	00	00	81.38
Death of persons above 90 - - - - - - - -	0	1	1

MARRIED,—In Skowhegan, Me., 17th inst., William M'Collom, M.D., of Woodstock, Vt., to Miss Marion Deering, daughter of A. H. Gilman, Esq., of S.

DEATHS IN BOSTON for the week ending Saturday noon, Nov. 19th, 100. Males, 56—Females, 44.—Accident, 5—asthma, 1—inflammation of the bowels, 1—congestion of the brain, 2—inflammation of the brain, 2—bronchitis, 6—cancer, 1—cholera infantum, 1—consumption, 27—convulsions, 3—croup, 3—debility, 1—diarrhœa, 1—dropsy, 3—dropsy of the brain, 1—epilepsy, 1—scarlet fever, 1—typhoid fever, 4—disease of the heart, 3—infantile disease, 1—insanity, 1—stricture of the intestines, 1—intemperance, 4—congestion of the lungs, 1—inflammation of the lungs, 6—marasmus, 6—measles, 1—old age, 2—paralysis, 1—peritonitis, 1—smallpox, 1—thrush, 1—unknown, 6.

Under 5 years of age, 35—between 5 and 20 years, 3—between 20 and 40 years, 28—between 40 and 60 years, 18—above 60 years, 16. Born in the United States, 61—Ireland, 30—other places, 9.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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REPORT OF OPERATIONS IN THE DEPARTMENT OF OPHTHALMIC SURGERY AT THE CITY HOSPITAL OF BOSTON,

Under the care of Dr. Williams, for three Months ending Aug. 30, 1864.

By Edward G. Loring, Jr., M.D., Assistant.

[Communicated for the Boston Medical and Surgical Journal.]

Extraction of Cataract, thirteen cases, in patients from 62 to 76 years of age; all of them successful.

In five patients, both eyes were operated on the same day. Ether was given in eight cases, no troublesome effects ensuing in any instance. The downward section was made in eleven, the upward in two cases. In three cases, portions of capsule, remaining in the field of the pupil, were torn across or removed by slight subsequent operations.

In no instance did the patient remain longer than four weeks in the Hospital, and three cases were discharged in a fortnight from the date of operation. In one patient, where both eyes were operated on, recovery was so rapid that at the end of a week the cicatrices of the cornea could be seen only on the closest inspection, and there was no injection of the eyes which would have attracted the notice of an observer. She was, however, kept in the Hospital another week, as a measure of precaution.

In the first patient operated on, nearly the whole of the vitreous humor, which was of almost a watery consistence, seemed to be expelled, together with the lens, at the moment of completion of the corneal section, notwithstanding the greatest care to avoid the slightest pressure on the eyes. The loss of vitreous was so very great as apparently to justify a most unfavorable prognosis; but the eyes being kept carefully closed, with the patient in the recumbent position, on his back, no ill effects resulted, and the patient made an excellent recovery. This sudden evacuation of the contents of the globe was probably due to spasmodic contraction of its muscles, with an exceedingly abnormal condition of the vitreous mass; as ether was not given, and no other cause could be assigned for the occurrence.

The dressings employed have been, graduated compresses of lint, very carefully disposed so as to make pressure in such a manner as to keep the edges of the wound in apposition, if possible. The pledgets of lint were covered by an ordinary compress, and the whole secured by a flannel roller bandage.

Iridectomy was not combined with extraction in these cases.

Extraction of cataract where the eye was in other respects diseased, was done in two cases; the patients being previously informed that the prognosis was regarded as most unfavorable, but preferring to accept the operation as affording a *possibility* of restoration of vision.

In one of these cases, where ether was not given, a considerable amount of fluid vitreous was lost during the operation, and, half an hour subsequently, a severe hæmorrhage took place, which was checked by iced compresses laid over the eye. The portion of clot projecting from the wound was excised the next morning by Dr. Williams, close to the cornea, without making traction upon it; and, though from this and two slight subsequent hæmorrhages, it was feared that suppuration of the globe might ensue, as is usual after copious bleeding has occurred within the eyeball, no such result ensued. The clot within the eye was gradually lessened by absorption, and the patient recovered as after an ordinary extraction, but, as was expected prior to the operation, without any gain as regarded vision. He was discharged in three weeks from the time of admission.

In the other case, the lens was removed through a small section of the cornea by the use of Waldan's scoop. The operation was followed by no troublesome symptoms, and the patient was discharged one week afterwards. The eye was found too much disorganized to be benefited by the operation.

Iridectomy was performed in three cases. In one, it was done for the relief of chronic iritis complicated with opacity and ulceration of the cornea, and probably with choroïditis. Great benefit was obtained, the pain and injection of the globe growing less and less, and vision beginning to improve soon after the operation. In a second instance the operation was done to enlarge a previously formed artificial pupil, and resulted in much improved vision. In the third patient, iridectomy was done in the hope of being able to discover a foreign body behind the iris; but this being impossible, the eyeball was afterwards removed.

Division or removal of opaque portions of capsule remaining after cataract operations, so as to leave the pupil clear, was resorted to in four cases. The instruments employed were fine needles or the canula forceps. In one case only was there any considerable irritation of the eye subsequent to the operation, and in this instance it soon subsided.

Removal of the eyeball, one case. In August, 1863, eleven months before he entered the Hospital, the right eye of the patient was struck by a bit of steel from a drill. He continued his work, as a mason, for two days; but afterwards he had more or less constant pain and uneasiness in the eye, sometimes preventing him from work, until the autumn. In March, 1864, he first noticed that the iris, naturally of a light blue, began to assume a brownish tinge. He had some sight with the injured eye till the last of May. A week since, he first felt severe pain in this eye, which increased till July 25th, the date of his admission to the Hospital.

At this time the iris was much changed in color; the pupil rather small, and its field muddy. At lower and outer edge of iris, a small dark spot, possibly a foreign body, could be detected.

As he now began to feel symptoms of irritation, and to perceive a diminution of vision in his other eye, the patient was advised to consent to a removal of the eye which had been the seat of injury, without delay—Dr. Williams being confident that a foreign body was still embedded somewhere in the eyeball, and regarding the ablation of the globe as the only security against sympathetic inflammation of the sound eye.

Ether was therefore administered, and an attempt made to discover and remove the foreign body without sacrificing the globe; but this proving impossible, the eye was excised—the recti muscles being divided close behind the cornea, the eyeball drawn forward, and the oblique muscles and optic nerve divided.

Hæmorrhage was arrested by filling the orbital cavity with a bit of sponge. This was removed after twenty-four hours, and simple water dressings applied. Cicatrization was completed, and the patient discharged in about a week. He subsequently presented himself at Dr. Williams's clinique and reported that all symptoms had disappeared from his other eye, and its visual power had again become perfect.

On cutting open the injured eye after excision, a bit of steel was found lying in the disorganized retina and choroïd, a little behind the iris.

A FRAGMENT OF MEDICAL AUTOBIOGRAPHY, OR A CASE REPORTED BY THE PATIENT.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—You may be surprised at the heading of this communication. But who better than the sufferer to give the story of his sufferings? I well recollect living next door to an invalid lady who got little sympathy from her household—they saying that it was nothing but hysterics, nerves, &c., which troubled the whole house; and earnestly was it wished she would seriously set about getting well. She told me the whole story one day, ending with declaring, that she "knew by her feelings how she felt." I said I agreed with her as to the cause of her trouble, adding that I knew of no other possible way by which she could get thoroughly acquainted with her disease but by her feelings.

But now for my story.

I am in my 79th year, and never was seriously ill but once in my long life. This was while I was in college, and my disease was called typhus fever. I was ill thirteen weeks; crazy, &c. &c., much of the time. The sickness of which I propose to give you an account, began Wednesday morning, long before daylight, Nov. 9th, 1864. I had been perfectly well during the day, except feeling occasionally a sudden click—a slight one—in my left side, which click I supposed belonged to any aged heart which has had its share of the troubles of long and weary days and somewhat laborious nights. Just as I felt it, I overtook an acquaintance twenty years younger than myself, of whom I asked if he ever had felt the click-like twinge just described. He said, "yes," and proceeded to account for its presence in himself. He had made some strong exertion, and felt, while doing it, as if he had strained his left side. When pain occurred, he ascribed it to some of the muscles between the ribs having been overstrained in the effort mentioned, and which were in a neuralgic state, from which he had nearly or quite recovered. I think my heart trouble is something more than neuralgia—or, as the masses call it, neuralogy; but let it be what it may, it will never annoy me if it preserves its present mild character. It tells me I have a heart. I have been told of men, and of women, too, who never dreamed they had such a thing.

The 8th passed quietly away. I drove moderately into the country, and saw the first foot fall of the coming winter. I took tea with a friend, "a Roman meal," which Cowper praises; called at 9, P.M., on a lady at the Tremont, and of course passed half an hour very pleasantly. Went to bed in excellent health of mind and body. Early Wednesday morning, I was somewhat emphatically called into conscious and rather uncomfortable life. There was a strange conflict between wind and water in the whole bowel region, and the question seemed to be which should have the victory. At length appeared the water in a broken stream, but wholly uncontrollable. This was troublesome, but I soon got where its force and fury, which were quickly manifested, could have safe sway. I am an old man, and have occasionally had bowel trouble. But this was all by itself—quantity and freedom of rendition had never been equalled. It soon stopped, or I would have been reduced to a dry thread paper. I looked to see what it was. To my utter surprise it was as white as this paper; or, rather, of a rice-water, skim-milk hue. It was as inodorous as water. I recollected that some laudanum was in the house for a feeble inmate, and I soon had the bottle brought. I could only guess at the dose, and concluded to try but sixty drops. The recent purgation had made me a little unsteady, and being in night costume only, the change of temperature from bed to chamber promenading increased the tremor, and probably the dose. My object was to prevent another irruption of the Visigoths, if possible, for I felt sure I had no chance if another torrent came.

I had not got into bed before I was seized with terrible sickness at the stomach. I know something of such sickness, for I have crossed the Atlantic four times, and in every voyage was a martyr to vomiting, being once not able to leave my state-room for twenty days. But the present distress was beyond any experience. It seemed to me I must die. The matter puked up was blacker than thirty crows; so solid was it, that I was often almost choked—and its taste perfectly horrible; in quantity, monstrous. At length it ceased. I staggered to bed in a state of utter exhaustion.

Now what was the matter? I had eaten but little the day before. My diet is bread and milk at all my meals, with occasionally some simple soup, and a potato. I may say I never eat meat, nor have I eaten meat for many years. What was this terrible mass of semi-solid, black, horribly tasting matter? I thought the upper and lower bowels had changed places of outlet. But there was no odor in the white or the black. I was in a maze—in strange trouble. "Quid proximum," thought I. But I was now ready for anything, or thought so, for I was as weak as a rag-baby.

Morning came. As soon as it was proper time, I sent for my family physician. I say proper, for outsiders are apt to think it of no sort of consequence when or how often they send for the "doctor," though I have been told that when the "doctor" sends his bill at the end of the year, there are those who think he is in a terrible hurry for his pay. But this may be scandal.

My physician came bright and early. I told him of my night watching, and showed him what I have above attempted to describe. "Where did it all come from?" said he, in strange wonderment. "Come from?" said I; "out of my mouth." "Out of your mouth?" again said he. I asked him to smell of it. "It is inodorous," said he; "you have much to be thankful for." "Yes," said I, "I have had all sorts of things, moral, intellectual, and physical—tobacco-smoke, and tobacco in every shape; but this beats Ned. I never saw or felt such a matter before in my mouth, and I could not wish my worst enemy to feel or taste such!

My family physician (and I never wish or can have another, or a better one) now examined the matter before him. He spoke of its weight. It seemed to him monstrous. My family physician is not rhapsodical. "It is as heavy as lead; and the quantity, it must be more than two quarts." "What do you think it is?" asked I. "The product of some disturbed gastric function," said he, still examining the matter in hand, or rather in ——, with fixed attention. He turned it into another vessel, and then said, "I see it is filled with small, very small rounded bodies, of the color of solid chocolate." "Is it blood?" asked I. "No," said he, "it is not blood, nor anything out of the large bowels." I thought this was very likely, for they had already passed quarts, if not gallons, of colorless matter, and if any other color had been in them it must certainly have shown itself. At least I thought so.

I was directed to keep quietly in bed—a rule very easily obeyed—to take a moderate dose of calomel, five grains, in a dry state laid on the tongue, and washed down with a teaspoonful or two of cold water. As I was greatly exhausted, I might drink some whiskey and water—and I agreed to do this, and the rather as I had a large tall bottle of Scotch whiskey, which I knew was genuine, for I had drank a like article on the banks of Loch Katrine, and my bottle had the genuine peat-smoke flavor, which when once smelled and tasted can never be forgotten. Diet, liquid farinaceous, or chicken or veal broth as preferred, and positive rest.

Thursday, Nov. 10th.—Still very weak; stomach, bowels and bladder quiet; no urine since attack; voice well nigh gone—requiring much effort, and husky at that. Head dizzy, uncertain; perfect loss of time, so that I asked if it was not tea time, when breakfast had not been served. This continued through the day. The error seemed ludicrous to my womankind—and kind they were—for they had to correct my errors of time very often. My kind family physician tried to explain my trouble by referring to the sudden and prodigious loss of blood, as proved by the discharges, and the small supply which had been made for repair.

I asked Dr. —— if he thought I should recover—in few words, if my disease was likely to be fatal. He said, no, with emphasis, and I believed him. Dr. Johnson said he thought a physician who did not answer truly this important question, was guilty of the greatest breach of confidence and of professional duty, and was utterly unworthy of both public and professional regard. My life had been one of almost unprecedented health of body and mind. I was now on my bed, perfectly exhausted by a most sudden and violent disease—and my mind was to my thought rapidly failing. I asked the question to learn whither I was probably tending, and the answer was of the deepest interest to me. The question was so answered that I had faith in what was said.

There was one fact in this history which was a most important one. The pulse was never disturbed. It beat, as it has done for years, about 72 times in a minute, with an occasional diminished frequency between two beats in between 30 and 40. I have called it a click; and if the pulse had sound, I think this would be heard. I retained, for the most part, the ordinary warmth of my skin. At times there was sweat, but it was never exhaustive. The approach to health was marked by increase of urine and diminished thirst. The tongue was heavily coated, brown and white, and was so stiff that I said if I should laugh aloud I might have broken a bit of it off. I am writing on the 13th of November, and this day I have had the first discharge from the bowels. My last date was the 10th; the 11th and 12th are not specially reported, but matters stated, or some of them, occurred on those days.

Very little medicine, professionally so called, was given. Vomits and purges, of course, were not indicated. The calomel, as prescribed by my family physician, was twice given, and upon two occasions I took some pills, the recipe for which I well remember was copied into our papers, from Calcutta papers, when the Asiatic cholera was raging there. These pills are composed of one grain of calomel and opium, out of which were made up twelve pills—one to be taken every hour till relief.

Now what was the disease of which I have endeavored to give a report, and which may have attracted the attention of the reporter by its severity, and from the fact that it was one of the only severe diseases which have occurred during a long life,—the only ones, in fact, which have kept him from the busy walks of healthful life. What was this disease, which still keeps him a prisoner of hope and at home?

I cannot but think it had in it some of the appearances of Asiatic Cholera. There were the profuse colorless discharges from the bowels, the intense vomiting, the thirst, the entire absence of urine for about three days, the disturbed intellect, the universal weakness, the loss of flesh. But how much was wanting to make up a case of cholera? And how happens it that I know anything of that disease?

I remember its appearance in Boston more than thirty years ago. The city, to provide for its approach, had a temporary hospital built in every ward, with all necessary furniture for the accommodation of cholera patients. What more wise, what more honorable in our public authorities, than to make these preparations for so terrible a disease! Among those who took the deepest interest in these hospitals, was my friend and neighbor, the late Dr. J. G. Stevenson, whom to know was to honor and to love. I remember the first subject of cholera. I was at a meeting of the Wednesday night club, at the late Hon. Charles P. Curtis's, at which was Stevenson, he being also a member. A message came to S., asking him to visit a cholera patient in Atkinson street. I went with him. The hospitals were specially devoted to those who in the alarm produced by the disease were liable to be left entirely alone, but being known to physicians might be by them at once admitted. I saw many cases in these houses, as did all others who wished to see them. I recollect one exhibition, which much interested me. Violent spasm is a symptom very strongly marked. After death the spasm may remain several hours. Now if an arm or a leg be bent by convulsions at death, it will remain in the same position in which it was in dying. If such a limb be struck with the hand or club, the limb will be thrown into all sorts of positions, and retain them till the softening of the flesh which follows death occurs. I have seen dead limbs move under blows as if under the action of the human will. Cures of cholera were rare in my wanderings. I met with one. This occurred in a cellar in Gooch street. The cellar opened upon the side walk. A light showed the way down. I went down, and opposite the door was a bed, and a man on it. He could only whisper with a most husky tone. He was wet and cold on the surface, while burning up inside. His only complaint was thirst—his husky scream, water! water! I directed a woman to take a large bucket, to a provision shop opposite, to have a large bit of ice put into it—to fill it with water, and put it on a stand near her husband — to give him a tin dipper hard by, and let him drink as much water as he pleased; and when it was all drunk, to go to the shop again, get more ice, &c. &c. as before. I gave him 12 of the Calcutta pills, bidding him to take one every hour. I called in the morning, and found the man convalescent. "How much did you drink?" "Two bucket-fulls, yer honor—and God bless you," &c. &c.

In a Calcutta paper was the following history. A major in the British army had cholera in its severest form. He had brought from England many packages of soda powders. He told his Cooley to give him one in a tumbler of water, and repeat it until he ceased vomiting. The Cooley did so, until vomiting ceased, and the major recovered. I had this in mind, when in my wanderings I met with the cellar case.

I believe very few recovered in Boston. In two instances injection of water into the veins was tried. I staid two nights to see the effect. There was always much relief after the injections, but it was temporary. At length the powers of life were exhausted, and death followed, but it was tranquil death. I went to an almshouse, one ward of which was filled, yes, crowded with cholera sick. They all died. There were manifest signs of agony, but not an attendant sound. There was the silence of death in the very act of dying.

Nov. 13th.—My family physician said I was better to-day. I believed what he said, though I still felt under the weather. He judged by the symptoms, I by my feelings; but his report was welcomed. Sometimes the physician speaks for encouragement, and when there is reason for this, the patient should feel pleased with the report. Sometimes friends, looking only on the dark side, will put in a caveat. My physician said this was sometimes embarrassing. He gave an instance. Mrs. —— was ill. She had been very ill. He called one morning, and having examined his patient, said, "Mrs. ——, you are better this morning." A tall maiden relative, who it appeared had watched with Mrs. ——, said, "I am surprised that you speak so encouragingly, for my niece has scarcely slept a wink the whole night, she has been so restless!" "Aunt Sally," said Mrs. ——, "you forget I slept full 5 hours last evening; how could I sleep all night afterward? I really feel better, Dr. ——." I have been told that in acute diseases remissions often occur when sleep—rest—follow, and with decided benefit. A crisis may occur under these circumstances, and convalescence begin. To be sure my experiences in this kind are few. But I can understand what my family physician meant. I am hopeful, and my experiences, which have not been wanting in troubles, have made this temperament most valuable to me.

A question arises as to the course to be taken by the medical man when the question comes, from patient or friends, under most unpromising or hopeless condition of the sick, as to the result—whether it is to be, death or recovery. I have been told that Dr. Rush, one of the most celebrated physicians of his time, told his pupils they might answer the question thus: cases apparently worse than this, have recovered; while others, apparently in less, or in no danger of death, have died. Rush, it is said, had a vast practice, and doubtless said what he fully believed was true. Suppose the sick are given up—the doctor has said he can do more. Somebody else may be called in—some celebrated quack—and the patient recovers. The influence of such facts is vast. Some years ago I read, in the London Quarterly, a passage which I have never forgotten, and whice I here cheerfully quote:

"We know that there is scarcely one hour in the day in which a judicious and well-informed practitioner may not say, with a safe conscience, 'I have done good to somebody.' Still the medical profession cannot do all that is expected or required. Sooner or later, and to every one among us, the time arrives when the best medical aid, as it regards the preservation of life, is good for nothing. It is true that, even under these circumstances, it may diminish pain, or alleviate some bodily distress not improbably worse than pain; but not unfrequently even these objects are unattainable; and the most skilful and experienced person, standing by the patient's bedside, feels that his wand is broken, and that he has nothing left to offer but his sympathy and commiseration. But the desire of life is not necessarily extinguished, even in the hour of death; or if it be so with the patient himself, it may still linger with his family and friends. When the art of the regular practitioner can do no more, are we to be surprised that the promises of others should not be wholly disregarded? and that even the miserable chance afforded by the impostors of the day should be looked at with something like hope, when no other chance is left? It may be said that to catch at such a straw as this can only end in disappointment; but the reflection that any plan, however in itself absurd, has not been tried, may cause disappointment also."

Nov. 14th.—I am very well to-day. The whole body taking care of itself famously. I have lost flesh, for my nether toilet is much too large for its contents. But no matter, I am satisfied. Last night, between 10 and 11, I felt my pulse. This pulse-feeling is a habit of my race, a strong vein of quackery running through all its branches. Well do I remember the spring physic—viz., brimstone and molasses, and wormwood tea—with which we younger children were annually flooded. Never shall I forget being driven from under the bed with the yardstick, that I might take the harmless *preventatives*, as they used to call those horrid and dreaded doses.

Infandum regina jubes renovare dolorem!

But the pulse was felt. So last night I felt mine, to see what was its mood. I counted 300 by my excellent time-keeper, which has a second hand—and lo! not a single interruption click, or other extravagance. I was standing by the grate. When in bed, I found the pulse the same, and so upon waking, and after dressing. Prodigious! thought I. A very small attack of disease, going from head to foot without stopping, and *clearing*, yes, clearing out every way, up and down thoroughly, and no mistake, and washing and sweeping all those errant heart capers entirely away! Why, I slept all night, till near breakfast, and had none of those *impertinent calls*, which commonly were three of a night, summer and winter.

THE HOUR OF DEATH.

Mr. Alfred Haviland, Surgeon to the Bridgewater Infirmary, read a paper, at the meeting of the British Association for the Advancement of Science, recently held at Bath, "On the Hour of Death in Acute and Chronic Disease." The author commenced by stating that the subject of the hour of death had occupied the attention of medical writers from the time of Aetius, who flourished at the Court of Constantinople in the fifth century, up to the present date, but that no practical fruit had been the result for the physician in his treatment of disease; he concluded that the time had now arrived for a thorough investigation of the facts in our possession, inasmuch as if there be any latent truth in them of importance to mankind, it is our simple duty to evoke that truth, and avail ourselves of its teaching to the practice of medicine. He remarked that the physician's duties do not cease when he has ascertained the disease of his patient, and prescribed medicine to remove it; by medicine alone, the patient is not healed; he has to act upon the advice of Hippocrates, and see that those in attendance do their duty also, and in his absence watch every phase and act in the living present. But, to do so correctly, the physician must know each cause of change, and by his knowledge anticipate what may occur, lay down simple rules for the guidance of friends and nurses, and teach them how to watch each circumstance of disease; he must know the changefulness of our bodies in health; he must take due account of this changefulness when our illness supervenes; he must know when all our vital functions are at their height; he must know when they are at their lowest ebb; for this knowledge is a most necessary element of success in his combat with the enemy which he has to encounter. Of late years the art of nursing has more than ever occupied the thoughts of physicians and the laity at large. We have had noble efforts made in the camp and at home to soothe the anguish of the wounded and diseased. The author had collected over 5,000 cases of death, with the *hour of death* and other circumstances recorded, which he had tabulated and exhibited on a large chart, the different results being distinguished by colored diagrams. By this chart he showed that, in 1,000 cases of death in children under five years of age, the periods of the greatest mortality took place during the hours between one and eight, A.M., and that an extraordinary depression took place in the succeeding hours. Between nine and twelve, P.M., the rate of mortality was at its minimum. He then compared these statistics with 2,891 deaths from all causes, and the chart showed how remarkably the wave lines of death compared with those above. He then compared these diagrams with deaths from consumption, which, although they showed a general resemblance in the wave line, yet between the hours of four to eight, A.M., there was a depression when compared with the first four hours period. He showed that small numbers are not sufficient for a statistical truth, and he therefore urged upon his provincial brethren to assist him in his investigation by forwarding to him data for further investigation of this interesting subject. He contended that the tables on the chart proved the extraordinary mortality in the early hours of the morning, when the powers of life were at their lowest ebb, and, strange to say, when the patient was least cared for. He urged the necessity of feeding and stimulating the patient at his weakest hour, so as to tide him over a critical period, and, even if death be inevitable, so to support the patient that he might at least have a few hours more of life snatched from eternity, to admit of his being able to carry out some neglected duty, pardon some enemy, or see some beloved friend. He finally urged upon his professional brethren the high importance of teaching friends and nurses how to attend to those under their charge. He concluded by saying that the subject itself required no apology for its introduction to the Association. He felt convinced that the subject was one which had occupied the attention of many of his hearers, when they had been watching hour by hour the fitful changes of disease in the persons of those dear to them, or of those to whom as nurses they had desired conscientiously to do their duty. To simplify this duty and to calm this solicitude at a time when either an excess of the one or an ignorant neglect of the other might be fatal, was one of the main objects of this investigation; and he felt convinced, however imperfectly he might have expressed his opinions, that it is one of deep interest not only to his profession, but to the community at large, and that the British Association would not deem it unworthy of their consideration.—*Canada Med. Journal.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 1, 1864.

STATEMENT OF THE LATE SURGEON-GENERAL OF THE UNITED STATES.—When, a few weeks since, we published the finding and sentence of the Court Martial in the case of the late Surgeon-General of the United States, we also published Dr. Hammond's request for a suspense of judgment until he had an opportunity to examine the evidence and publish an explanation of it. His review of the evidence is now before the public, and we feel it a duty we owe to the profession and ourselves to give it something more than a passing notice. It is contained in a pamphlet of seventy-three pages, entitled "A Statement of the Causes which led to the dismissal of Surgeon-General William A. Hammond from the Army; with a Review of the Evidence adduced before the Court."

Without prejudging the case or reflecting upon the members of the Court by which Dr. Hammond was tried, we think that, *a priori*, there is much in the circumstances of the trial which should lead the community to accept the verdict rendered against him with some hesitation as to its justice. We will not dwell on the previous standing and reputation of the condemned, nor the influences which led to his appointment. His friends will naturally see in these facts the strongest presumptive evidence against his guilt, while they will fully appreciate the power of the wounded professional pride and class opposition which his sudden promotion over the heads of so many able members of the Surgical Staff in the old army would inevitably array against him. Nothing else than this could have been expected in the nature of things. It was no small part of the difficulties which beset the path of the late Surgeon-General to soothe this professional pride and to remove this class opposition, by showing his preëminent fitness for the office to which he had been raised; and so calling out a spirit of patriotism in those who felt themselves aggrieved, which should obliterate all private griefs. Neither will we discuss now the great reforms which his induction into office signalized, nor the gigantic labors thrown upon him at once in the organization of our immense system of government hospitals and the regulation of the medical staff of our vast army. We would refer, however, for a moment to the tribunal itself by which he was tried. No one is less disposed than we are to call in question the honesty and fairness of that tribunal; but from the very nature of its organization, and the manner of conducting such a trial and rendering a verdict, the nation at large cannot attach to its decision the same weight that it would to a jury trial.

The Military Court was composed of nine members—three less than the number of jurors to which a culprit accused of far less heinous crimes in civil life is entitled to sit upon his case. The verdict of condemnation or acquittal, in such courts, is not of necessity unanimous, as in a civil court, but a bare majority may decide it. Thus in the present instance, the opinion of five men may have cast down the Surgeon-General from his place of honor and usefulness to the position of an infamous outlaw. Surely this is a circumstance which may well lead thinking people to reflect before accepting as unquestionable such a decision. Indeed, if rumor speaks the truth, this is just the number of the gentlemen constituting that court who rendered the verdict of condemnation. Although all the members of the court are sworn to secrecy, we believe—yet it is impossible for those who have the opportunity of observing, to avoid recognizing by their manner, subsequent to the trial, those who were friendly and those who were adverse to the accused.

Again, a court-martial is conducted on peculiar principles. The whole community do not have the full opportunity of following the case throughout that is afforded in a civil trial. Much of the evidence may be taken, and many of the discussions which may arise may be conducted, in secret. In the present instance we are informed that the court was repeatedly cleared of all witnesses, so that the public is not in possession of a full knowledge of all the proceedings. All these circumstances taken together are, we think, without any personal bias either way, enough to justify the community at large in accepting the verdict in the case of the late Surgeon-General with a good deal of reservation. The whole proceeding had more of the character of a preliminary examination before a Grand Jury than a public trial. We propose to analyze, as briefly as we can, Dr. Hammond's pamphlet, avoiding as far as possible those portions of it of a strictly personal character, and confining ourselves in the main to the evidence bearing directly on the question of guilt.

The first part of Dr. Hammond's pamphlet is devoted to showing that, from the very commencement of his official duties as Surgeon-General, his efforts for the faithful and thorough performance of those duties were constantly frustrated by the persistent ill-will of the War Department. Dr. Hammond cites a number of instances to show this, quoting freely from his correspondence with the Secretary in proof. This certainly shows a most lamentable want of sympathy between these two officials, where for the good of the country it was of the utmost importance that there should have been the utmost cordiality and co-operation. This opposition the late Surgeon-General attributes to an interview which took place at the office of the Secretary of War only two days after his appointment, which is reported in detail in the pamphlet before us, and which led to the unfortunate result, that his intercourse with the Secretary was from that time forward strictly limited to the official necessities of his position.

Turning over the pages of Dr. Hammond's pamphlet, we come to the matter of the removal of Medical Purveyor Cooper from the office which he filled in Philadelphia, and the appointment of Surgeon Murray in his place. It was in the course of this transaction that the letter was written by Dr. Hammond which led to the second charge upon which he was tried by the court-martial, namely, that of falsehood, in saying that Gen. Halleck had requested as a particular favor that Murray might receive this appointment. As this letter appears before the voluminous correspondence relating to the purchase of supplies, we will refer to this charge first.

Gen. Halleck admitted in his evidence that he had written to the Surgeon-General, asking that Murray's wish for an appointment "to Eastern hospital duty" might be considered favorably by the Surgeon-General, and the letter was offered in court. When asked, however, whether he had made any other communication to him (the Surgeon-General) at any time on the subject—the transfer of Murray—he answered, "*Never, Sir, to my recollection.*" In an answer to another question, Gen. Halleck said (speaking of a letter on private business which he had received from Murray), "*I do not think he designated any place other than 'Eastern hospital duty.'*" The next day Gen. Halleck sent to the Court a copy of portions of the letter referred to, which contains the following passages, which are italicized, as are those above quoted, in the pamphlet before us.

"*I want to be ordered to hospital duty in Philadelphia, New York, or some point north of these places. Philadelphia would suit me best.*"

* * * * * * * *

"*If you will send a memorandum to the Surgeon-General's office, requesting him to order me to a hospital in Philadelphia, it will be done at once.*"

We quote the following comments by the Surgeon-General on this evidence and the conviction of guilty under which he stands :—

"There is not the least positive assertion in General Halleck's testimony that he did not have the conversation with me on the subject. He simply does not recollect that he did. The fallibility of his memory is shown by the fact that he did not recollect that Dr. Murray had specified Philadelphia as the place he wished to be sent to ; and yet in his letter Dr. Murray mentions it three times. The truth is that a day or two after General Halleck wrote the note to me in regard to Dr. Murray, I had a conversation with him, and he distinctly stated that he would like to have Murray ordered to Philadelphia. In the lapse of sixteen months he had forgotten this fact, as he forgot Dr. Murray's wishes as expressed in his letter. Moreover, how did I know Murray wanted to go to Philadelphia, unless I received the information from General Halleck? And what object could I possibly have had in telling Dr. Cooper what I did, unless I believed it to be true? If I had said, 'General Halleck wishes Dr. Murray to be ordered East, and you are the only one I think it possible to relieve,' it would have fully expressed as much as what I did write. But, notwithstanding all this, General Halleck's evidence amounts to nothing in support of the charge of falsehood. If he had said, 'I recollect distinctly that *I did not* have any conversation with the Surgeon-General,' that would have been positive evidence. As it is, his testimony is not of sufficient weight to determine a case of the slightest importance, much less one involving the character of his brother officer. Moreover, the alleged falsehood was asserted on the 13th of October, 1862. If it was a falsehood, why was I not at once arrested and tried for it? The Secretary of War had my letter in his possession a few days after it was written, and yet he allows fifteen months to elapse before he brings the accusation of falsehood against me!"

In all candor and justice, it seems to us that this is very insufficient evidence on which to convict an officer of so infamous an offence as deliberate falsehood.

The analysis of the late Surgeon General shows that the other charges against him may be classified as—"1st, Those which allege acts on his part which were in excess of his legal authority; and 2d, Those which distinctly charge personal corruption and intent to aid others to defraud the Government."

The first and second specifications* come under the first class. Space does not allow us to follow Dr. Hammond in his answer to these charges. Suffice it to say, that he shows by documentary evidence, that the orders so issued were in accordance with previous usage in the Surgeon-General's office, and that similar orders have been issued by his successor in the office; and he argues that they were fairly within the authority delegated to him by the law under which he came into office; which says, "that the Medical Purveyors shall be charged, *under the direction of the Surgeon-General*, with the selection and purchase of all medical supplies."

The letters published in the pamphlet before us show conclusively the usage in the Surgeon-General's office before and after the term of service of Dr. Hammond, and yet the court would not admit them as evidence to establish this point! Dr. Hammond also shows that in issuing the orders objected to, he was actuated only by a desire to secure the best articles for Government use, at the lowest price for which they could be bought.

The third specification declares that Dr. Hammond ordered Dr. Cooper, Medical Purveyor at Philadelphia, to purchase a lot of blankets of Mr. Stephens, which he knew to be of inferior quality, after Dr. Cooper had refused to buy them.

In reply to this, Dr. Hammond denies that he ever gave Dr. Cooper such an order. Dr. Cooper was unable to produce any written order in court, but swore the order was a verbal one. Mr. Stephens testified that he had no communication whatever with the Surgeon-General relative to the sale of these blankets, that Cooper made no mention to him of having been directed to buy them, and finally, Cooper himself testified that he made no objection to the Surgeon-General as to the quality of the blankets, but merely objected to them "as not being of the kind I was using, and to their being comparatively dearer than what I could purchase." Finally, his own certificate, produced in court as originally appended to the bill, is as follows:—

"I hereby certify that the above account is correct and just, that the articles charged for have been furnished, and that the prices were those customary at that place. GEO. E. COOPER,
"*Surgeon U. S. A.*"

Completely falsifying his own evidence. And yet the court found the accused guilty of this charge!

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* These specifications charge the late Surgeon-General with unlawfully directing Dr. Cox, Acting Medical Purveyor at Baltimore, to receive certain blankets of William A. Stephens of New York, and not to purchase drugs in Baltimore. For the specifications in full, see this Journal of Sept. 8th, No. 6.

The fourth specification charges the Surgeon-General with a similar order to Cooper to purchase a lot of blankets of Stephens with the intent to aid him to defraud the Government, "*which blankets so ordered were unfit for hospital use.*"

The court-martial found him guilty of this charge, except as to the words italicized above. Dr. Hammond's defence against the remainder of the charge in this specification is entirely incompatible with the possibility of his guilt. He shows that after correspondence on the subject with Cooper he telegraphed him to "*do as you see best about the blankets from Stephens.*" In addition, he wrote the next day a private letter to Cooper, in which he says: "If you don't want his blankets, don't buy them at any price." Surely, here was discretionary power conferred on Dr. Cooper, which is entirely incompatible with the supposition that he was peremptorily ordered to make this purchase. The letter was produced in court, and bore an indorsement in pencil, "Received, Med. Purveyor's office, Philada., Pa., June 18th, 1862." A former hospital steward of Dr. Cooper's, and every clerk who had been on duty in his office, Dr. Hammond states, swore that this indorsement was in Dr. Cooper's hand-writing. Dr. Cooper also, he says, "after swearing that he could not say positively whether he had received it [the letter] or not, admitted that it was familiar to him." And yet Dr. Hammond was convicted on this charge! We forbear to comment on the motives or influences which led to such an astonishing result. But there is a mystery about this letter which we cannot pass over in silence, and here we quote from Dr. Hammond's pamphlet.

"Another circumstance which shows clearly the existence of a conspiracy to ruin me, is the fact that during my trial a number of letters were returned to me which had been stolen from my office. In January, 1863, Dr. J. R. Smith, who was at the time the principal assistant in the bureau, had a large sum of money stolen from a locked drawer of his desk; letters were missed, others directed to me were never received; and it was very evident that my correspondence was tampered with.

"On the 17th March, 1864, a package of letters was handed to my counsel by a gentleman, a friend of mine, to whom they had been addressed. The package was opened by my counsel, Messrs. Bradley and Harris, in my presence, and, in addition to the letters sent, contained the following:—

"Circumstances have placed the inclosed papers in my control, and I know where there are others which bear strongly in General Hammond's favor, and which have been secretly taken from his office. I will obtain them if possible. He has been and now is conspired against. I cannot remain silent while a great wrong is attempted. I dare not tell you *how* I got these papers. *I* did not steal them. I know you will do what is right with them; my only object is

JUSTICE."

* * * * * *

"In all, the package contained forty-nine papers. They were of such a character as showed that my office had been ransacked from top to bottom, and even the private drawers of my desk invaded. It was doubtless in one of these raids that Dr. Smith's money was taken.

"Of these forty-nine papers, one was the original letter from me to Dr. Cooper, dated June 17th, 1862, with the indorsement on the back in his handwriting, already given, and which had either been taken from his office or furnished by him to some one in his confidence."

* * * * * *

"On the twenty-eighth of March my counsel, Mr. Bradley, received through the post-office my letter to Cooper of July 30th, 1862, which had evidently once been in his office.

"I have also received information that while my trial was in progress another package of letters, which had been stolen from my office, was sent by some enemy to Major-General Oglesby, the President of the Court. I do not know what he did with them. He did not return them to me, as he was bound in honor to do, and my counsel has written to him on the subject. * * * *
Those from my office were taken surreptitiously.

"I submit these facts to the public without comment. No one can fail to perceive how thorough and how persistent was the combination against me."

We have nothing to say of these transactions which they will not at once suggest to every candid reader.

The fifth specification is so directly connected with the charges contained in the third and fourth, that the guilt or innocence of the accused with regard to one implies the same with regard to the whole; we therefore pass it by without further comment.

The sixth specification, on which Dr. Hammond was found guilty, charges him, on the 31st of July, 1862, with directing the Medical Purveyor in Philadelphia to purchase an amount of supplies of the value of one hundred and seventy-three thousand dollars, of John Wyeth & Brother, of Philadelphia, notwithstanding he knew that this firm had before furnished medical supplies of light weight, and bad quality, at excessive price—with the intent to aid them "thereby fraudulently to realize large gains therefrom."

Dr. Cooper again is the principal witness. According to Dr. Hammond, he testified that the order was a verbal one, given in Cooper's private office, with no witness present. Dr. Hammond denies this, and produced as collateral evidence the following letter, which bore Dr. Cooper's endorsement, and which was accepted as evidence by the court.

"SURGEON-GENERAL'S OFFICE, WASHINGTON CITY, D. C.,
July 29th, 1862.

"*Dear Doctor:*—I shall give you orders in a day or two to get ready a large quantity of supplies, so as to be constantly prepared for any emergency which may arise. I will try to be in Philadelphia in a few days to consult with you on the subject. In purchasing supplies, I think it is much better to buy all articles from those who are dealers in them—liquors from liquor dealers, groceries from grocers, books from booksellers, drugs from druggists, etc. The system of buying all things from one person, which prevailed to a great extent under the old regime, is not the correct principle.

"I am glad you like Hobart. I am anxious to see the instruments.

"Yours sincerely, W. A. HAMMOND.

"SURGEON G. E. COOPER, U. S. A., *Philadelphia.*"

Comment is unnecessary.

Dr. Hammond adduces abundant evidence to show that the supplies furnished by the Wyeths previously to his appointment were of excellent quality. He declares that "no report was ever made to my office, previous to July 31st, 1862 [the date on which the specification charges him with issuing the order], that the stores supplied by Messrs. Wyeth were inferior in quality, deficient in quantity, or excessive in price." And only one, by a citizen physician at Fort Delaware, was received subsequently to that date. Per contra, the evidence of a large number of army medical officers, including such men as Medical Inspectors Cuyler, Coolidge and Vollum, Surgeon Letterman, Medical Director of the Army of the Potomac, and many others of similar standing, was given in the court, and was conclusive as to the excellent character of their supplies. In a single instance, where some inferior articles had been supplied to a medical storekeeper, but of which the Surgeon-General had no knowledge, the parties who furnished them cheerfully replaced them with others of good quality. They had been accidentally furnished under the pressure of a sudden emergency. The charge of light weight arose *from using troy instead of avoirdupois weight in testing the purchases, and in measuring fluids that are sold by weight.* This is from the report of Medical Inspector Coolidge, who had been sent to Philadelphia to ascertain the truth with regard to the purchases in question, and who also says, "*I have no reason to believe that any fraudulent sales were made.*"

With regard to any corrupt influence supposed to have been brought to bear on the Surgeon-General by the Messrs. Wyeth, one of the firm, Mr. Francis Wyeth, testified as follows :—

"*Q.* State whether, in any of the transactions of your house with the Medical Purveyor's Department of the United States, the accused had any interest, personal or pecuniary, direct or indirect, any profit or advantage therefrom.

"The Judge Advocate objected to this question ; was overruled, and desired his exception to be noted.

"*A. He had not.*"

"And further, when cross-examined by the Judge Advocate.

"*Q.* How do you know that the Surgeon-General had not any interest in the supplies furnished by your house?

"*A. No business connected with the house could be carried on without my knowledge. Being a partner in the concern, I was interested in all the monied transactions of the firm. I would be consulted, and be one to advise with.*"

The seventh specification charges the Surgeon-General with *corruptly* and unlawfully ordering of the Messrs. Wyeth forty thousand cans of their Extract of Beef, "*which extract of beef so ordered was of inferior quality, unfit for hospital use, unsuitable and unwholesome for the sick and wounded in hospitals, and not demanded by the exigencies of the public service.*" The moral offence charged in this specification lay in the words which we have italicized, and of this charge *he was acquitted by the court,* but found guilty of the alleged illegality involved in the order. In his evidence with regard to the quality and great value of this timely supply, Medical Inspector Coolidge says, speaking of the battle-field near Centreville, "*if we had had ordinary food we would not have been able to cook it in the quantities required by the wounded;*

and I believe that the hospital supplies, and mainly the beef extract, saved many lives on that battle-field."

Of the next specification on which the Surgeon-General was found guilty, this finding only extended to the alleged excess of authority in requiring a Medical Purveyor to purchase certain blankets. This question of authority we have already discussed, and will therefore say no more about it. Of the charge of corruption in connection with it, he was acquitted.

This finishes the charges and specifications on which the late Surgeon-General was tried by court-martial. We cannot forbear to quote from his statement a passage relating to the principal witness against him.

"After Cooper had concluded his evidence in regard to the letters of June seventeenth and July thirtieth, which the Judge Advocate wished him to swear had never been in his possession, but which Dr. Cooper was forced to admit 'were familiar' to him, he came to me outside of the court-room and expressed the utmost contrition for the evidence he had given. He said no one could tell how he had been goaded and threatened, and cajoled into testifying as he had, and that he would 'catch it' for not swearing he had never received the letters above referred to. His conversation was long and evidently sincere, and was heard in part by Messrs. Bradley and Harris, my counsel, and by Dr. S. Adams of the army. To Mr. Harris he expressed himself in similar terms to those he used to me. I can only hope, for his own sake, that he has truly repented of the bitter wrong he has done me."

One word with regard to the comments of the Judge Advocate on the enormity of the offences of which the accused had been convicted. Towards the close of his report he says :

"That the natural and necessary result of the acts of the accused, as established by the record, involved a criminal spoliation of the Government treasury, which alone would have called for his dismissal from the service, cannot be denied ; but when it is remembered, as shown by the proof, that this spoliation was in part accomplished by the purchase of inferior medical supplies and stores—thus compromising the health and comfort, and jeopardizing the lives of the sick and wounded soldiers suffering in the hospitals and upon the battle-fields of the country—soldiers solemnly committed to the shelter and sympathies of the office held by the accused, by the very law and purpose of its creation—it must be admitted that this fearfully augments the measure of his criminality."

If the reader will turn back he will find that it was just on this very point, the inferiority of the supplies, that the Surgeon-General was in several instances acquitted. With regard to the two remaining instances in which he was convicted—namely, the alleged order to buy inferior blankets, and that to buy medicines of the Wyeths—in the first instance the charge was not sustained by a particle of proof, and in the other the strongest evidence was offered that the articles supplied by this firm had been, almost without exception, of the best quality !

We have thus gone over the principal points in the late Surgeon-General's statement, in a very brief and cursory manner, it is true, but fairly and dispassionately, we think, and we leave it to our readers to say whether the verdict and sentence passed upon him are compatible with the documentary evidence which he quotes from the record of the Court. Has he not made out a case strong enough to authorize any honest man to look upon him as innocent of the terrible charges of which he has been convicted, until the whole evidence in the case shall be laid before the country and the world? We have carefully refrained from discussing the influences and motives which are believed by Dr. Hammond to have led to his otherwise unaccountable conviction, and of which he speaks quite freely and at length in the pamphlet before us, and have confined ourselves to a simple review of the action of the court-martial. To Congress we look for a thorough and searching examination of the whole trial, which alone can satisfy the friends of one whom so many have looked upon with pride as a credit to the medical profession and the nation. To no other tribunal can we look for a clearing up of the mystery which involves this extraordinary trial; as we learn, from good authority, that the prosecuting Attorney of the United States, after a revision of the proceedings of the court-martial, has informed Dr. Hammond's counsel that he finds nothing on which to base a criminal prosecution. The late Surgeon-General is therefore cut off from the opportunity of a fair, open, jury trial. If he is the guilty man that his enemies believe him to be, his guilt is ten times blacker for the statements in the pamphlet before us. If he is innocent, what compensation can atone for the stigma, even though temporary, which has made his name a reproach to the medical profession and the nation!

Miscellaneous matter omitted for want of space.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, November 26th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	48	43	91
Ave. mortality of corresponding weeks for ten years, 1853—1863,	36.9	38.1	75.0
Average corrected to increased population - - - -	00	00	82.16
Death of persons above 90 - - - - - - - -	0	1	1

Died,—At his residence, High Street, Charlestown, on the 24th ult., Dr. Benjamin Rush Tinslar, U.S.N., aged 64 years. He had just returned from Portsmouth, and was about to sit down at his supper table, when he fell on the floor and almost instantly died. He was a native of New York, but had made his residence in Charlestown some twenty-five years. He entered the Navy in 1823, and was last in active service several years ago as fleet surgeon, on the "Hartford," then stationed in the East Indies.—At his residence, in New Haven, Ct., Nov. 24th, Prof. Benjamin Silliman, Sr., aged 84, for many years known as the able Professor of Chemistry in Yale College.—At Greenville, R. I., Nov. 13th, Dr. Dan King, formerly of Taunton, Mass., aged 72 years.—At Manchester, N. H., 21st ult., Zaccheus Colburn, M.D., aged 63 years 10 months 16 days—a graduate of Brown University, class of 1827.—At New Orleans, Oct. 21st, of yellow fever, Dr. Ira W. Bragg, formerly Assistant Surgeon in the Marine Hospital at Chelsea, aged 28 years. Dr. Bragg was a native of Concord, N. H.

Deaths in Boston for the week ending Saturday noon, Nov. 26th, 91. Males, 48—Females, 43.—Apoplexy, 1—asthma, 1—inflammation of the bowels, 1—inflammation of the brain, 2—bronchitis, 3—cholera, 1—consumption, 13—convulsions, 3—croup, 4—cyanosis, 1—debility, 1—diarrhœa, 1—diphtheria, 4—dropsy of the brain, 3—drowned, 1—erysipelas, 1—exhaustion, 1—scarlet fever, 5—typhoid fever, 5—disease of the heart, 1—infantile disease, 5—jaundice, 1—laryngitis, 2—congestion of the lungs, 1—inflammation of the lungs, 8—marasmus, 2—paralysis, 2—peritonitis, 1—premature birth, 3—smallpox, 1—putrid sore throat, 1—tumor, 1—unknown, 7—whooping cough, 2.

Under 5 years of age, 46—between 5 and 20 years, 11—between 20 and 40 years, 15—between 40 and 60 years, 9—above 60 years, 10. Born in the United States, 69—Ireland, 16—other places, 6.

THE

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HERNIA CASES TREATED AT THE BOSTON CITY HOSPITAL,

By David W. Cheever, M.D., one of the Visiting Surgeons.

[Communicated for the Boston Medical and Surgical Journal.]

Case I.—*Congenital Inguinal Hernia; Operation for a Radical Cure.*—Michael S., æt. 7. Three weeks after birth, mother noticed a swelling in right inguinal region. Whenever the child exercised, the rupture descended into the scrotum, producing severe abdominal pain, and rendering the patient helpless. A truss had been worn without benefiting the hernia, as regards a cure. A younger brother is also suffering from hernia of the same side. Parents are not ruptured, and are robust, laboring people. On Sept. 16th, the child was admitted to the City Hospital for an operation. The bowels were thoroughly cleared with castor oil.

Sept. 17th.—It was thought best to operate by the simplest form of Wood's operation, because the ring was small and the hernial sac did not project far. The patient having been etherized, a vertical incision was made in the scrotum from over the external ring down to the testicle, and the skin dissected up on either side. The little finger of the right hand invaginating the scrotal fascia into the ring, and the cord being beneath it, the hernia needle was passed up above the finger, and made to pierce the inner pillar and conjoined tendon, and brought out through the skin, which was drawn inward by an assistant. One end of a piece of copper wire (No. 20), silvered, was now hooked on, withdrawn through the wound in the scrotum, and the needle unthreaded. Next, the needle was passed up outside the finger, curved under the outer pillar, passed through it, and made to emerge at the same puncture in the skin of the abdomen. The other end of the wire was now hooked on and withdrawn. The loop above and the two ends below were now firmly twisted, thus approximating the pillars together. The end of the wire was now passed through the loop, over a roller, and firmly clamped. A spica bandage was then applied over all. The patient was put to bed, with the knees raised by a pillow.

The next day there was very little fever; a slight redness over the scrotum. On the third day, the bowels moved spontaneously; the wound had begun to suppurate. On the fourth day there was a little tenderness over the abdomen. The right testicle was red and painful. Very little suppuration. Testicle supported. Water dressing. On the fifth day the roller was removed, because the wires were beginning to cut through the skin. The ends were left loose, but not untwisted. Testicle continues a little swollen. On the seventh day the tenderness over the abdomen had disappeared. Patient jumped out of bed in the night, on an alarm of fire.

On the fourteenth day the wires were removed. There is a large, firm cylinder of induration filling the inguinal canal from end to end, and tapering off as it reaches the internal ring. Testicle well. No pain or tenderness.

Oct. 7th, three weeks after operation, wounds entirely healed. May have his clothes, and walk about the room. No truss applied. Hernia does not come down. The patient was discharged from the hospital, but returned to report himself, seven weeks after the operation. No external ring could be felt. The hernia had not come down, and the canal remained filled with lymph. He will continue to remain under occasional observation.

Case II.—*Inguinal Hernia of two and a half Years' duration; Operation for a Radical Cure.*—John F., æt. 9. Two years and a half since, as a consequence of a fall, he complained of pain in the right inguinal region, and the mother noticed a swelling there. A truss was applied and continued until worn out, without curing the rupture. Now, Oct. 3d, the right external ring will admit the little finger with ease, and the hernia descends on motion or coughing. Parents desire an operation.

Oct. 5th.—He was operated on precisely as the former case, and it is needless to repeat the various steps of the operation here. On the second day he had a natural operation from the bowels, and no tenderness over the abdomen. On the third day suppuration began, and there was slight redness over the inguinal region. On the ninth day the roller was removed. The wound was suppurating freely, The inguinal canal filled with hardened tissue. Constitutional state good. On the fourteenth day the wires were removed. Through some inadvertence he was left in bed somewhat longer than necessary after the wounds were healed, but on the twenty-sixth day got up and walked about, without a truss, and with no appearance of the rupture. The canal was apparently firmly blocked, and the ring effaced. He was last seen four weeks after the operation, well, and without any truss being applied. He will report occasionally.

Although it is too early to determine positively the final success of these operations, as in the case of those reported last summer in this Journal, when from four to six months had elapsed, yet these two cases seem to prove—

1st, That Wood's operation for the radical cure of hernia is a safe one to perform on young children.

2d. That it gives in them great promise of success, because the tendency of Nature is probably to close the rings, as the child grows; yet that Nature unaided almost never does succeed, and when aided by a truss only occasionally does so. This operation therefore affords in children a safe and ready means of favoring a natural cure—if nothing more—far superior to a truss, which latter is not only uncertain, but often difficult to be fitted and worn by a young person, without excoriation, and without the rupture slipping down past the pad, when it does more harm than good. Whether or not the operation stands the test of time when done on adults—and we see no reason to doubt Mr. Wood's statistics—we can certainly advise it as easy, safe and effective in children.

Case III.—*Strangulated Femoral Hernia; Operation; Recovery.*—Mrs. Bridget C., æt. 42, has had hernia for five years, at first causing no inconvenience, but latterly subject to occasional strangulation, as often as once a month, but from which she generally recovered in a couple of hours. Hernia always remains down, she says. Yesterday P.M. was suddenly seized with vomiting and pain, which has continued. No dejection since the strangulation, but previously a diarrhœa.

Aug. 31st.—She was brought to the Hospital about 6, P.M., in a very feeble condition, the hernia having been strangulated twenty-four hours. Pulse weak; skin cool and clammy; retching, and constant dragging pains in abdomen, and a countenance indicative of great distress. On examination, an oblong, elastic tumor, as large as a hen's egg, was found in the left groin, below Poupart's ligament, and was diagnosticated as a femoral hernia. Having been etherized, an attempt was made to reduce by taxis, without avail, and similar attempts had been made before admission. Her pulse fell off, and it became necessary to give brandy and ammonia. After she had rallied, she was again put under ether, and the operation commenced by a straight incision through the skin, from just below the spine of the pubes, downwards and outwards. The coverings were very thin, and the sac was soon exposed. A hernia knife was now passed on the finger down to the crural canal, and Gimbernat's ligament divided upwards and inwards. The finger now freely passed beneath the crural arch into the cavity of the pelvis; but the hernia did not yield. The intestine could be felt above Poupart's ligament, evidently continuous with that in the sac, but encircled by a rigid band. This was evidently the falciform border of the saphenous opening in the fascia lata, and the seat of the stricture. A director was insinuated between this and the sac, and the stricture divided. Immediately the vermicular motion of the strangulated bowel began to return; the sac collapsed, and was easily replaced within the abdomen, without having been opened. A graduated compress, wet with cold water, and spica bandage were applied, and one grain of opium given; to be repeated in four hours, if needed. Beef-tea, and stimulants if required.

Sept. 1st.—Has had three dejections. Slept well. No pain in bowels; a little soreness on pressure. Pulse quiet. Tongue clean. Aspect much improved. Continue cold-water dressings. Gruel and tea, and a moderate amount of beef-tea.

2d.—Comfortable night. One dejection, with some pain. A little tenderness over abdomen. Pulse 80. Tongue clean.

3d, 4th, 5th.—Continues to improve. Wound granulating.

Not an unpleasant symptom supervened. As soon as the cicatrix of the incision would bear a truss, one was applied, and she was discharged, well.

Case IV.—*Strangulated Femoral Hernia; Operation; Death.*—Mrs. Susan H., æt. 40. One year ago violently strained herself, and produced rupture on the left side. It was readily reduced by a physician. Since then it has come down occasionally, and been returned. [As she has never worn a truss, and the sac was incarcerated, the latter has probably been down all the time.] The patient was first seen, in consultation, at 2, P.M., Nov. 11, and was found to have had the hernia down since 5, A.M. Repeated and forcible attempts at reduction by taxis had been made. There had been vomiting and colicky pains all day. After a moderate renewal of the taxis without avail, it was advised that she be removed to the Hospital and etherized. She was carried there about 5, P.M. The countenance was anxious, flushed and excited, the pulse quick; vomiting and pains continue. A tumor, as large as a hen's egg below, and above rolled out over the *fascia lata* and Poupart's ligament, occupied the left femoral region. It was firmly fixed, with very thin walls, prominent and somewhat livid. Drs. Stedman and Buckingham saw her in consultation, and concurred with me in thinking that the tumor would not bear much more taxis, and that an operation was imperative. The patient having been etherized, gentle efforts at reduction were made in vain. A long incision was made over the tumor, the superficial layers dissected through, and attempts made at reduction without opening the sac. But although both the crural ring and the fascia lata were freely incised, the sac could not be reduced, and it was found to be adherent to the sides of the crural canal. The sac was now freely slit open, when considerable serum was found, and a knuckle of small intestine, which for the space of an inch and a half was quite dark colored, not absolutely black, but a very dark brown. Even now no vermicular motion was set up, and it was only by drawing down the bowel above, and tucking it up from beneath with the finger of the other hand, that it eventually could be returned within the abdomen. The sac could not be replaced. A graduated compress and water-dressing were applied, and one third of a grain of morphine given, to be repeated if required.

Nov. 12th.—She looked pretty well. Slept a little. Pulse 112. Tongue moist. Some vomiting continues. Has had no motion from the bowels, but some tenesmus. Complains of thirst. Urine drawn off. Small amount of beef-tea ordered. Citric acid drink and half grain pills of solid opium.

13th.—Not so well. Tenesmus has continued, until finally checked by laudanum and starch injections. Vomiting. Distress. Pulse 120. A moderate tympanites; but little pain or tenderness over bowels. Opiate treatment continued.

14th.—Looks worse. Pulse more feeble. Profuse sweats. Abdomen pretty well distended, and more tender. Tenesmus. Vomiting of a dark fluid. Countenance anxious. A red blush extending from site of operation for several inches upwards and outwards.

15th.—Fourth day since operation. Symptoms all worse. Sinking. Pulse 150, and fluttering. Vomiting and tenesmus continue. Died at 3.30, P.M.

These two cases present certain points of contrast not without interest. Neither had worn a truss. Yet in the patient with hernia five years, the sac was free, while in her who had been ruptured but one year it was incarcerated. The patient who died was a much stronger and more healthy woman than the one who recovered, and her strangulation had existed only twelve hours, while in the other it had lasted for twenty-four hours; yet in the latter the rupture, returned without opening the sac, had done perfectly well, showing that the intestine speedily recovered its circulation, while in the former the bowel was found dark, congested, almost mortified within the sac. In this patient attempts at reduction by taxis had been made more forcibly, and longer continued than in the other. Are we not, then, justified in concluding:—

1st. That very moderate and gentle taxis under ether will do all that can be done towards reduction; and that taxis may do more harm, if long continued, than strangulation for an equal time.

2d. That the operation is far less dangerous than prolonged taxis, particularly if the rupture can be returned without opening the sac.

3d. That we cannot form any judgment as to whether the sac *is incarcerated and irreducible*, either from the statements of the patient, the length of time the rupture has existed—provided no truss has been worn—or the appearance of the hernia itself.

But that we should operate early; avoid opening the sac if we can, but not hesitate to do so if the whole sac cannot be readily and gently reduced after the stricture is divided; bearing in mind that simulated reduction where the whole mass may be pushed into the areolar tissue, external to the abdomen.

Much of this is but truism, we are aware. Yet it would seem that there are certain cardinal rules of treatment in such an emergency as strangulated hernia, which cannot be too often reiterated.

ILLUSTRATION OF SOME SURGICAL PHENOMENA BY THE THEORY OF PROJECTILES.

By E. C. Bidwell, Surgeon 31st Mass. Vols.

[Communicated for the Boston Medical and Surgical Journal.]

I suppose that every missile projected from the mouth of a firearm, of whatever kind or calibre, has, in addition to its projectile motion, a motion of rotation upon an axis of its own. If this rotary motion be not the purposed result of the construction of the weapon, it is acquired from accidental causes, which may operate upon the missile at its start or during its flight. Any defect in the gun, or even a slight inequality in the shot, may cause it. Indeed, it is the design of the spiral groove which is introduced into most modern arms, large and small, to give the shot a rotation upon an axis corresponding to the line of traject, thereby to forestall the accidental rotation, which is more likely to be in some other direction, and tends to deflect it from its intended course. This rests upon a manifestation of the physical property of inertia, by which a body in rotation tends to continue to rotate in the same direction, unchanged by any motions that may be impressed upon it as a whole. In other words, the direction of its axis continues parallel to that with which it commences, so long as the rotation continues. This principle is illustrated in the familiar toy, the top, in the spinning plates of the mountebank, and in the revolutions of the heavenly bodies. Now, as the line of flight is always a curve, the axis of rotation ceases to correspond exactly with that line the moment the flight commences. With every succeeding instant the one departs from the other more and more widely. A conical ball from a rifled gun must therefore impinge obliquely by its rotating side, and the more so as the gun is more elevated for long range. That is the theoretical result. I presume that in artillery it is the actual result also. It is said to have had a curious exemplification in the case of the percussion shells sent into Charleston by the Swamp Batteries, which failed to explode because they did not impinge by their apices. In the case of small arms it is found that the designed rotation is often merged in that which proceeds from accidental causes. The impressions upon conical leaden balls picked up on battle-fields, and their positions in various lodging places, prove that they impinge in all directions, and scarcely more frequently by the apex of the cone than by any other part. The acquired rotation of round shot is probably always upon an axis perpendicular, or nearly so, to their projectile direction.

This rotation of round musket balls is probably an important element in determining the erratic course which such balls sometimes take in the body. For it is evident that a ball in rapid rotation entering a medium in which it meets with considerable resistance, will most easily overcome that resistance on that side of which the surface motion is towards the resisting medium, because on that side the force of rotation is added to that of projection, and on the other side is so much deducted from the same force. It will consequently be deflected towards the side of least resultant force. It is well enough to remember that the rotary motion, meeting less resistance than projectile motion from the air, and none from gravity, may continue rapid and even violent after the latter is nearly or quite spent.

Another way in which the rotary motion of projectiles may modify surgical results, is found in the occasional violence of spent cannon balls. A round ball may be moving slowly along the ground, apparently just ready to stop. A careless observer puts his foot against it, and receives an injury which may be fatal to the member. It has been suggested in explanation of such cases, that the velocity was really much greater than it seemed; but if it were possible to note its progress and direction within such limits of distance that one could put himself in the way of it, its velocity must really have been very moderate. Others have referred to the great momentum which the missile *had*, as if momentum was not exactly proportionate to the velocity, and exhausted when motion ceases. But it is possible for a cannon ball, as for a billiard ball, or a marble, to have a rapid rotary motion after its projectile motion has ceased, sufficient to make it a dangerous neighbor. In that condition anything not capable of greater resistance than the human body, brought into forcible apposition with it, would inevitably suffer violence, precisely as it would if brought into like contact with machinery in like rapid and irresistible motion.

The same principle comes in to modify the injury in oblique impingement by cannon balls. If the rotation is such that on the side impinging the surface is moving forward, or in approximately the same direction as the projectile motion, a laceration results, co-extensive with its touch. The revolving surface moving with the velocity of rotation added to that of projection, *by friction* tears its way through the tissues as in the case already cited. If the rotation be in the contrary direction, so that the rotary motion of the impinging surface in a measure offsets or counterbalances the projectile motion, as in the case of a cannon ball simply rolling over a part, its surface friction may be so slight as to leave the skin unbroken, even unabraded, at the same that the projectile momentum is sufficient to crush and comminute the parts beneath it to a fatal degree. Of this kind are the cases in which persons are supposed to be knocked down or killed by the "wind" of a cannon ball—an idea which is sufficiently refuted by the fact that shot not only come very near, but into actual collision, carrying away a hat or an arm, without any such stunning or destructive "wind."

It is indisputable that injuries from cannon shot are met with, of these two kinds, in one of which there is profound lesion, with little or no external indication; and in the other frightful laceration, displaying at a glance the full extent of the injury, yet altogether, perhaps, a much less grave injury than the other. That the rotary motion which these projectiles have is sufficient cause to account for the difference of effects, is demonstrable on the principle of mechanics. It is not unimportant to know that something more than mere inexplicable caprice governs movements and determines results, here as elsewhere; that effects follow causes, even in the erratic movements of the missiles of warlike engines.

A CASE OF CHRONIC GLAUCOMA. IRIDECTOMY.

By Gustavus Hay, M.D., Boston.

[Communicated for the Boston Medical and Surgical Journal.]

Mr. C., æt. 70, American, carpenter, came to the Infirmary April 23, 1863. His sight had been failing for eight years. The right eye read with difficulty at 20 feet Dyer's upper line (adapted for a hundred feet) and a letter of the next line; the left eye read only the upper line. In the absence of any note on the subject, we suppose the above sight was with the unaided eye, without any glass. In each eye the field of vision was diminished and the tension increased. The ophthalmoscope showed in each the characteristic deviation of the retinal vessels at the periphery of the nerve, a little less marked in the right eye. There had been no pain, and, we think, no inflammation. There was no inflammation at the time.

April 26th.—Iridectomy was done on the right eye.

May 4th.—The blood nearly if not quite disappeared from the anterior chamber.

About May 18th.—Patient discharged. Vision apparently not improved. Acuteness of vision not quite as much as before the operation. The ophthalmoscope showed the media to be clear and no retinal extravasations.

July 30th.—Sight certainly not diminished. With a convex glass of 40 inches focal distance the eye operated on reads at 20 feet the two upper lines of Dyer's.

1864, Nov. 14th.—The eye, with the same glass, reads the three upper lines of Dyer's at 20 feet. The other eye, though at the time of the operation nearly as good as the right, now with difficulty sees at 20 feet the card on which the letters are printed.

In cases of chronic glaucoma unaccompanied by pain and inflammation, the advantage of iridectomy is not so striking as in acute inflammatory cases. We generally say to the patient, in the former class of cases, that by means of the operation the sight will diminish less rapidly than it otherwise would, and the above case seems to confirm this view; for at the end of eighteen months the eye operated on has lost, if anything, certainly very much less than the one not operated on.

LIGATURE OF THE COMMON CAROTID ARTERY. DEATH.

By Wm. B. Reynolds, Surg. 2d U. S. Sharpshooters.

[Communicated for the Boston Medical and Surgical Journal.]

First Lieut. Wm. Fisher, 99th Penn. Vols., was admitted to Hospital, Oct. 9th, 1864, having received a gun-shot wound, the ball entering two and one half inches behind the symphysis of the inferior maxillary bone of the left side, and lodging just under the skin, close to the cervical vertebræ on the same side. He had bled very profusely, and from the time of his reception until death, was unable to articulate, leading me to believe that the pneumogastric nerve was severed or injured. I plugged the several openings, but could not control the hæmorrhage, and proceeded to operate. In the usual way, I tied the common carotid artery, without administering chloroform, the patient evincing little pain, and secured the artery below the omo-hyoid muscle. There was no mental disturbance. His mind was clear. He died twenty-six hours after the operation, reaction never having been re-established, notwithstanding that essence of beef and brandy had been freely administered.

I tied the artery low down for the reason that the condition of the parts required it, as they were much swelled and very tense from effused blood.

LETTER FROM PHILADELPHIA.

[Communicated for the Boston Medical and Surgical Journal.]

Messrs. Editors,—But a short time ago, I wrote the announcement of the successor to Dr. Wm. Pepper, and now I am called upon to record his death. He died in harness, literally worked to utter exhaustion, though consumption has the merit of having caused the gap in our circle. Prof. Pepper was beloved, admired and respected by all with whom he came in contact. Though not eminent as a teacher, his ill health preventing his being heard beyond the first few benches, yet his views were sound, and found many disciples.

Medically, we are doing nothing now; the schools are going on as usual, the quizzers are quizzing, the embryo doctors are being sharpened to the proper point for the *green room,* the societies are meeting monthly and sometimes oftener, there is comparatively little sickness, not even the "spotted fever" which scourged us last winter, we are rapidly recovering from the terrible election mania, and, as I said before, there is nothing new. Stop! We have struck oil. That is, as a profession. It is astonishing to what an extent the profession are going into oil stocks. They speculate in oil, think and drink oil, prescribe oil, and—what do you think of the following:—℞. 100 Walnut Island, *a* 5½ b. 30. M. It is a fact. At all the meetings, clubs, everywhere, it is oil! oil!! oil!!! One quite prominent M.D. is said to have made $15,000 in a few weeks. I am afraid, at this rate, the fees will be so lubricated that they will slip *out* of our hands faster than *in*, and the poor patients will slip through our fingers into the hands of the undertaker.

You may prepare to be taken by storm next June, as, from present indications, a large number of our physicians will attend the next session of the American Medical Association, in Boston. It is most earnestly to be hoped that the almost numberless committeemen will attend to their duties, and come fully prepared with valuable reports, and not with excuses for work not performed. What a vast work could be done, did our brethren view this Association in the proper light, and not as a mere pretence for feasting and sight-seeing. Yours, &c. N.

Philadelphia, November 28th, 1864.

ON THE INSPIRATION OF VAPOR IN CERTAIN LESIONS OF THE BREATHING APPARATUS.

By John Hunter, M.A.

Without laying claim to any great originality, I trust that the few observations I have to make upon this important subject, to which I have directed considerable attention, may be worthy of notice by the profession.

I suppose no one will deny that, as a general principle, the use of moisture in combination with air is of service in chest diseases. This we see daily evidenced by the beneficial effect of sea-air—which contains vapor in excess of the amount held by the air generally—in the different forms of bronchitis, &c. But it is to insist on the powerful remedial agent which we possess in vapor when judiciously used at the bedside of the patient that is the object of the present paper. On the first appearance of an attack of, say, simple bronchitis, the first symptom observed by the patient is a feeling of oppression in breathing, "a tight feeling across the chest." This is caused by the proper secretion of the lining membrane of the lungs being partially arrested. The air-cells are in an equal degree incapable of performing their proper functions—namely, the reception of oxygen from the inspired air, and the giving out of carbonic acid gas; the result of which is that the patient has a diminished area of breathing-surface, in proportion to the intensity of the attack. And here I may remark, in passing, that there is an evident necessity in such a case that the patient should have the purest air procurable, to make some amends for the deficient quantity. Now in this stage of the bronchitis I believe we have no such powerful agent as steam, properly applied. The precise mode of application may be varied to suit different attacks in patients of different ages, and other peculiarities; the great principle being that the steam should be carried with the inspired air into the air-cells, where it not only acts as a substitute for the natural mucous secretion, but by its soothing action disposes the membrane to resume its normal functions. I have seen an attack of acute bronchitis cut short by these means, almost without any other; while in the different forms of asthma it is found of the greatest service. I put the acute bronchitis first in the list, as I think that it yields to the power of steam more easily than any other form of chest-disease; but it is good in all. And even in chronic bronchitis it is of the greatest service in softening the glutinous sputa, and rendering it much more easy to be got up by the patient, thereby saving time and many coughs, the patient being enabled to get up all his expectoration at the beginning of the night, and thus start, as it were, with a fresh account, instead of being tormented by the small instalments frequently due. In phthisis, also, I have found the breathing-in of steam to be of the greatest service in the frequent though often slight attacks of localized congestion, which denote that the disease is placing its grasp upon another portion of the lung; such attacks, if not altogether warded off, being certainly modified in their intensity. I could now give details of many cases in which phthisis appeared to be kept in subjection, each exacerbation of the disease being speedily met and apparently crushed; but I must proceed to give details of the mode of application of the steam. This varies in different patients.

In the case of infants, where the simplest means must be used, I have found nothing to succeed so well as placing a flat and broad vessel at each side of the cot in which the little patient is; these should be kept filled by the nurse with hot water, and the steam from them is caused to ascend and float round the little sufferer, who unconsciously inspires the beneficial vapor. In patients of more mature age the steam may be applied by an ordinary teapot, which being *half* filled with boiling water, and the mouth applied to the spout, the patient may be taught to draw in the steam with his inspirations. At first it may give rise to a little irritation of the mucous membrane, but the patient quickly feels the beneficial effect, and generally perseveres in its use. It is a good plan to put some tea, cinnamon, &c., at the bottom of the teapot, which prevents the insipid taste of the steam from being disagreeable to the patient. I lately had a patient, an overlooker in a cotton factory, who was suffering from chronic irritation of the lungs, evidently arising from the small particles of cotton floating with the inspired air into his air-cells, and there giving rise to his sufferings. I explained to him the action of steam in his case, and he, being of an ingenious turn, put a piece of elastic tubing, about four feet long, to the spout of the kettle, and after his day's work, regularly sat by his fire inhaling the steam, and in about half an hour was able to get up all the cotton taken in during the day, thereby ensuring a comfortable night's rest, which had been before impossible from cough. Steam may be applied in this way: a small perforation is made in the lid of a common kettle, into which may be soldered a short tin tube bent up at a right angle; attached to this may be a tube of vulcanized india-rubber, of any reasonable length, which may reach over to the bed-side of the patient, and, opening out near the patient's mouth, may during the night keep the air inspired hot and moist. The whole expense of this apparatus is only a few shillings. This plan is adapted for night-work, as the kettle, if filled at bed-time, will furnish steam sufficiently during the whole night. Many other plans may be adopted, and no doubt will occur to the ready mind, but the great object to be attained is to keep the air inspired warm and moist as a powerful curative agent, being one particularly useful in this climate, where diseases of the chest are so common.--*Lon. Lan.*

ASSIMILATION OF ISOMORPHOUS SUBSTANCES.

E. Roussin has performed a series of experiments on hens and rabbits, in order to ascertain whether similarity in form and composition is accompanied by any peculiar physiological properties. In one series of experiments, he investigated this question with regard to the shell of the hen's egg. This contains 90 per cent. of carbonate of lime; and he endeavored to ascertain whether other isomorphous carbonates could be made to replace the lime-salt in the shell. Accordingly, some hens, some time before laying, were shut up in wooden cages, at a distance from the ground and from any wall, and were fed with potatoes and oatmeal, or with oatmeal moistened with water. With their food, the substances with which the experiments were made were mingled. The result of these experiments was, that carbonates of baryta, strontia and magnesia, peroxide of manganese, protoxides of iron, zinc, copper, lead, cobalt, or the oxides of these metals, were readily assimilated by the hens and eliminated in the coverings of their eggs. Alumina, sesquioxide of iron, manganese, and the oxides of antimony, were never found in the egg-shell.

Another series of experiments had relation to the soft parts of the egg. The albumen and yolk yield, on calcination, a notable proportion of chloride of sodium. As the alkaline iodides, bromides and fluorides are isomorphous with this salt, it was endeavored to ascertain whether, after their administration, iodine, bromine, or fluorine would be found in the egg. Not only was this the case, but the quantity of these elements present in the egg was remarkably large. They were apparently distributed in equal proportions between the albumen and the yolk. Eggs containing bromine, iodine or fluorine, have no peculiarity of taste; and it is suggested that this observation may be made useful for therapeutic purposes.

The administration of the alkaline iodides, and especially of the bromides, was accompanied by a singular phenomenon, viz., the gradual disappearance, in some instances, of the calcareous covering, in proportion to the increase of the above-named substances in the interior of the egg. This occurred in hens left at liberty, and having free access to carbonate of lime; and was not generally observed in strong birds with good appetite.

In a third series of experiments, it was endeavored to ascertain whether arseniate of lime could be assimilated and substituted for phosphate of lime in the bones—the arseniates being isomorphous with the phosphates. The result was found to be that, when small quantities of arseniate of lime are introduced into the food of a female rabbit, the animal gives birth to young whose bony skeleton contains a notable proportion of arsenic, while their muscular tissue contains scarcely any traces. The arsenical compound is also eliminated by the urine in the form of arseniate of ammonia and magnesia.

M. Roussin concludes, from his experiments, that substances isomorphous chemically are assimilated and eliminated in a like manner from the animal economy, and may be regarded as isomorphous in a physiological point of view.—*Ohio Med. and Surg. Journal*, from *Gaz. Méd. de Paris*, and *British Medical Journal.*

ON THE EMPLOYMENT OF BENZINE IN TRICHINIASIS.

By Professor Mosler.

In his late work on intestinal worms (*Helminthologische Studien und Beobachtungen*, Berlin, 1864), Professor Mosler directed attention to the poisonous influence which benzine exerts upon trichinæ in the intestinal canal, and he further narrated an experiment which seemed to show that the trichinæ in the muscles did not perhaps altogether escape from the action of this substance. A pig which had been infected with trichinæ was treated during four weeks with increasing doses of benzine. It then died. The trichinæ with which its muscles were crowded had a peculiar appearance, and showed no movements even when the temperature of the flap in which they were placed was laid. A rabbit fed by Dr. Mosler with the flesh of the animal died in eight days, and only presented intestinal trichinæ in small number. Dr. Leuckart sent a certain quantity of the same flesh to three of his friends, who administered it to a series of rabbits. The experiment failed completely in all these animals except one, in which, after great trouble, a single trichina was found. It seemed from these results that benzine had killed the immense majority of the trichinæ in the muscles of the pig. But it was believed that the pig had been poisoned by the benzine, and hence it was not to be expected that this substance could be used successfully to combat trichiniasis in man. Later experiments have, however, proved to Dr. Mosler that larger doses than he had given in this case can be supported with impunity; the death of the pig had been caused by a pneumonia, which had been occasioned by the accidental penetration of benzine into the air-passages, the result of a faulty mode of administration. It was thought a very interesting question to determine if benzine in large doses could be borne by the human economy in the febrile condition which exists at the commencement of trichiniasis. Dr. Mosler had an opportunity of studying the question on a large scale during the alarming epidemic of trichiniasis which desolated Quedlinburg at the beginning of the present year. He went there on the 20th of March, and the treatment by benzine was immediately put in force by himself and the resident physicians. At first it was given in capsules of gelatine, but this method was soon given up as expensive and troublesome. The following mixture was usually given: benzine, two drachms; liquorice juice, mucilage of gumarabic, of each an ounce; peppermint water, four ounces. A tablespoonful every one or two hours, the bottle having first been well shaken. In this form benzine was easily taken and well borne. Many of the patients stated that under this treatment they soon felt better, and that the pain in the limbs was relieved. The largest doses were given by Dr. Rudolff, who gave as much as two drachms daily, and this was continued for from four to six days. Dr. Mosler had the opportunity of satisfying himself that in none of the patients, even in those in whom the fever was high, did any bad effects show themselves; in particular, there was no appearance of nervous or pulmonary affections, which are so often observed when benzine is administered to rabbits. Dr. Mosler undertook a fresh series of comparative experiments upon pigs, putting himself as far as possible in the same position as a physician would be, both as to the doses of the remedy and as to the time when the treatment was commenced; that is to say, commencing a week after the injection of the trichinæ, a period at which trichiniasis can be diagnosticated in man. The following are the conclusions to which Dr. Mosler has been led by his observations and experiments:—That benzine, which holds the first place among all anthelmintic remedies, may be administered to man without bad effect in larger doses than was formerly thought possible: That, given in doses which the human organism can tolerate perfectly, it kills with certainty trichinæ in the intestinal canal, and so prevents the emigration of the embryos; and that therefore benzine is the only rational treatment to be employed in the trichina disease of man.—*Edinburgh Med. Journal,* from *Berliner klinische Wochenschrift,* No. 32, 1864.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 8, 1864.

The London Lancet.—In one of the late numbers of *Punch* there is a black and horrible picture, one that will not be easily forgotten, representing a huge cannon driven into an abyss by the Furies, and crushing in its descent beneath its ponderous and sharply-spiked wheels both the armies of the Republic and those in rebellion against her. Just in its path is the tattered flag of our country, bearing but seventeen stars. It is called the American Juggernaut. The artist has done his work well, for he is always particularly clever in his cannon. We remember, not many years ago, another large cartoon of his, in which there was a whole battery of them. Behind them was planted the red cross of England, in front and lashed to their muzzles a host of captive Sepoys, and in the foreground another butchery upon which native wives and orphans are made to look, pleading in vain for mercy. That picture was called Justice. To all this we have not one word to say. We accept it as a truthful index of the sentiments and wishes of the ruling classes of Great Britain. As Americans, we have our own feelings, but we had never supposed that the pages of a medical journal was the proper place for their expression. We had held them to be devoted rather to the cultivation of a Christian Art, which looks upon all men as brothers, and to science, which should know no geographical boundaries.

The London *Lancet* has a different ideal, it seems. It has more than once published statements respecting the treatment of our sick and wounded, which it knew must be false, and which it has never been just enough to contradict, and has not lost an opportunity of expressing ill-will whenever it saw the slightest pretext not absolutely disconnected with medicine. But now it has overstepped even this flimsy veil of professional decency, and, finding no longer any grounds for defamation in our military surgery and Sanitary and Christian Commissions, comes boldly out in as malignant abuse as the *Times* itself. Not wholly trusting in its own powers, however, it calls to its aid one of the most scurrilous papers in London, and in a recent leader quotes at length and approves the following vulgarity of a special correspondent. We will not soil our pages by repeating the whole of the article in question; enough is given, however, to show how noble it holds the purpose for which we are fighting, and how far out of its way it has gone to perpetuate and stamp its approval of the picture we have alluded to. We cannot believe that the profession of England can sanction such prostitution of medical journalism.

"The gross-feeding and unwholesome look of the teetotaller in England is to be ascribed to a ghoul-like craving for heavy meat teas, greasy muffins, sally-lunns, and hot suppers: but in the United States to an overweening addictedness to pie. American ministers of the gospel gorge on pie 'till the *odium theologicum* rises in their throats, and they must curse their brethren or choke. Full of pride and pie, they wax bloated, and kick at their apostolic mission. Plethoric with pie, they bellow forth denunciations from their pulpits and roar for blood. There is nothing open and above-board in pie. It can be eaten stealthily and in secret. A slice of a cut pie is never missed. I have heard of young ladies who took pie to bed with them.' Orators are not referred to, but it may be surmised that the most celebrated living American speech-maker and lecturer was cultivated on pie. Of this popular orator a lukewarm admirer recently said—'It isn't what he says, but the way in which he says it, that takes away your breath. He'd tickle a tortoise into good manners, I guess. He doesn't worry a man by giving him too much to think about, and yet somehow or other he never sits down without *having made you wish to put a bullet into somebody.*'

"The Confessions of a Pie-Eater have lately been published. They are heartrending. All the miseries of infancy, childhood, youth, and manhood, arose from an ungovernable lust for pie. 'Pie darkened his mind, stupefied his faculties, paralyzed his energy. Pie forced him to abandon a lucrative and honorable career for an unsuccessful whaling voyage to Cape Cod. Pie drove him into exile.' Pie deadened all the finer moral feelings, and ultimately drove him into the lowest depths of degradation. Beggared in pocket, broken in health, he deserted his wife and family, tried his fortune with unscrupulous politicians, sank lower and lower in the slough of vice, committed forgery, and was sent for ten years to the State prison. All owing to pie ! 'I tell the tale as it was told to me,' says our contemporary's correspondent. 'It may read very like a burlesque ; but there is a substratum of sad truth in it. The late illustrious Abernethy had a presentiment of the ravages which pie was making on the American constitution when he rebuked his dyspeptic patient from beyond the sea with the gorging propensities of his countrymen. Mexico is said to owe her ruin to the game of *Monti* ; and if Columbia does not abate her fearful craving for pie, the very direst future may be augured for her.'

"The present civil strife in America is to be looked on as a hideous nightmare, produced by half-a-century's indulgence of an unhallowed appetite for pie : a nightmare which Mr. Tenniel has portrayed with terrific vigor in his recent cartoon, the American Juggernaut. Who does not shudder as the massive cannon, impelled by the Eumenides, rushes, in the darkening day, down the steep declivity, and crushes beneath its huge wheels the vainly struggling hosts ! Never was a *nobler* lesson more forcibly depicted by the artist's pencil."

IN the number of the New York *Medical Times* published August 24th, a paragraph appeared, charging the President of the American Medical Association, Prof. N. S. Davis, of Chicago, with openly uttering the most disloyal and atrocious sentiments in a public speech delivered some months before. This paragraph having recently fallen under the eye of a professional friend, he addressed a letter to Dr. Davis, inquiring as to the truth of the statement. To this he immediately replied, denying it in the most indignant terms. He also stated that he had sent an equally explicit denial to the Editor of the *American Medical Times,* which was not received, however, until after the publication of that Journal had been suspended. The publisher promised to forward the denial for publication to the Philadelphia *Medi-*

cal and Surgical Reporter, and also to the *Boston Medical and Surgical Journal*. If sent to this office, we can only say it has not been received. In a recent number of the Philadelphia *Reporter* we find Dr. Davis's statement, as follows :—

EDITOR AMERICAN MEDICAL TIMES :—

SIR,—My attention has just been called to a paragraph in your paper of August 20th, 1864, headed "Disloyalty of the President of the American Medical Association." The paragragh is as follows :

"CHICAGO, *June* 20*th*, 1864.

"Our democratic friends have been in convention at Springfield during the past week. * * * * * The peace element prevailed, as one of the electors at large is Dr. N. S. Davis, of this city, who, in a public speech some months ago, '*thanked God that disease and battle were depleting our armies to such an extent, that the tyrant Lincoln would soon be powerless to wage war upon the rights and institutions of the South.*' "

Your correspondent gives this as "one *fact* on which the grave accusation (of disloyalty) rests." As this so-called *one fact* seems to be all that your correspondents have been able to find, even in the anonymous correspondence of partizan newspapers, it seems almost a pity to spoil it. But truth and justice require me to say that a more inexcusable and *libellous* falsehood was never written. No such language or sentiment was ever uttered by me, on any occasion, either public or private.

The meeting alluded to was held in Bryan Hall, in this city, in the spring of 1863. In addressing that meeting, I alluded to the fact that several noted divines and leaders in the party supporting the administration had publicly "thanked God for the defeats of our armies, because they had brought the proclamation of emancipation," and denounced the sentiment as heartless and unchristian.

The next morning an unscrupulous partizan newspaper of this city represented me as having said just what I had actually denounced its own friends for saying. Such is the true origin of the paragraph furnished you by your disinterested correspondent "J. S."

Now, Mr. Editor, if any of your correspondents or readers are really anxious to know whether I am "loyal" or not, let them give an exact and concise definition of the word as they wish it to be understood, and I will inform them at once. Yours truly,

Chicago, Aug. 8*th*, 1864. N. S. DAVIS.

BERKSHIRE MEDICAL COLLEGE.—At the late annual commencement of this School, the exercises are spoken of as unusually interesting, and the graduating class, which numbered sixteen, as exhibiting the highest order of attainments for their calling. Two prizes were awarded for the best specimens of practical anatomy : one to F. J. Swift, of the graduating class ; the other to M. S. Chamberlain, of Brimfield, undergraduate. The annual address was on the "Errors and Delusions of the Medical Profession," and was delivered by Dr. O. S. Root. The diplomas were delivered to the graduates by the venerable founder and President of the College, Hon. H. H. Childs, M.D. At the commencement dinner, speeches were made by invited guests, several of the professors, and Dr. Gilbert, of the graduating class.

The following are the names of the graduates, their residences, and the subjects of their theses:—

Daniel D. Gilbert, Boston, Exosmosis and Endosmosis.
Charles L. Holt, Albany, Me., Dysmenorrhœa.
Marquis Hall, Brimfield, Pneumonia.
Wm. W. B. Green, Providence, R. I., Diagnosis.
W. H. H. Shepard, Warren, Gun-shot Wounds.
Henry J. Millard, Stamford, Vt., Phthisis Pulmonalis.
F. J. Swift, Wilmington, Vt., Duties of a Physician.
J. E. Norwood, Livingstonville, N. Y., Inflammation.
E. M. Whiton, Southport, Me., Diphtheria.
Frank K. Paddock, Hamilton, N. Y., Venesection.
G. A. Wilder, Circleville, N. Y., Intermittent Fever.
Cyrus Allen, Palmyra, N. Y., Stricture of the Urethra.
Henry Eastman, Pittsfield, Dysentery.
E. McCollom, Jr., Rochester, Vt., Retrospectus.
D. Sherwood Eckler, Athens, N. Y., Scarlatina.
E. Newton Beale, Spencertown, N. Y., Inflammation.

FOREIGN MEDICAL INTELLIGENCE.—A letter from M. Trousseau to the editor of the *Union Médicale*, explaining his reasons for resigning the chair of Clinical Medicine and returning to that of Therapeutics, contains the following passage:—

"The extreme facility of my address, and the clearness which is attributed to me, are perhaps natural gifts, but they were purchased with great labor. Every morning at six o'clock I am at work, and I return to it again on half my evenings. I regard clinical teaching as a very serious undertaking, and I wish to be acquainted with every new idea which is brought forward. This labor has endangered my eyes; I could no longer continue it without great risk of losing my sight. Accordingly, last August, I wrote to the Dean of the Faculty begging him again to lay my resignation before the Minister, being determined to appeal to the Council of State if I was refused. The Dean and several of my colleagues expressed to me their lively regrets on seeing me retire from teaching, in which I had as yet lost none of the favor of the pupils; and as the resignation of M. Rostan left his chair vacant, and as M. Grisolle, Professor of Therapeutics, passed to that chair, the chair of Therapeutics was thrown open, the Dean and the Minister expressed their wish that rather than quit the Faculty, I should resume a subject which I had taught for fifteen years with some success, and which required from me less labor. I consented to this proposal. I continue physician to the Hôtel Dieu, and I return to the chair of Therapeutics; and I hope that the few years of green old age during which I may be able to continue my instructions may not be useless to the youth of our schools. I should much have preferred repose, which I have gained a perfect right to; but I have felt compelled to yield to the wishes of the Dean, who is my excellent friend, and to those of my colleagues."

Professor Trousseau now counts thirty-three years of service in the Faculty, but he carries his sixty-three years with the ease of a man scarcely arrived at fifty.—*Edinburgh Medical Journal.*

Mr. James Spence, Senior Surgeon to the Edinburgh Royal Infirmary, has been elected Professor to the chair of Surgery in the Edinburgh University, rendered vacant by the death of Prof. Miller.

Among the elections to the new Belgian Parliament we notice the name of M. Vleminckx, Medical Director of the Belgian Army and President of the Academy of Medicine. It will be remembered that Prof. Virchow represents in a similar capacity the liberal party in Prussia.

M. Claude Bernard recently presented a memoir to the Academy of Sciences upon the physiological properties of opium and its alkaloids. Another active principle has been discovered, called narcein, which occupies a mean position in its soporific properties between morphine and codeine. MM. Debout and Béhier are engaged in an investigation of its action on the human economy, which will soon be published. We learn from Prof. Clarke that it is coming into extensive use in Paris.

The Medical Association of France is about to erect a statue to the memory of Laennec.

The old Hôtel Dieu of Paris is to be demolished, and the plans of the new hospital have been adopted. The building will be erected at a very little distance off the present site ; and two streets will be considerably enlarged to afford space and frontage. The area to be occupied will be 22,000 square yards, the present hospital not occupying half that area.

On Life Tables calculated by the Swedish Calculating Machine. By Dr. Farr.—In his remarks Dr. Farr replied to a question that had been put to him relative to the life-rate in this country, which was 40 years for males and 42 for females. Bath, he said, might be made one of the healthiest places in Somerset, which county was one of the healthiest in England. The mortality in Bath had been shown to be 25 males and 20 females per 1000 living of each sex, and, in the healthiest district, 17. Much was said about the salubrity of Italy. Now he found, from statistics, that the death-rate for Italy was 31 in 1000 ; Tuscany gave 32 ; the Neapolitan Provinces, 35 ; Sicily, 29 ; Sardinia, 29 ; Lombardy, 29 ; Piedmont, 28 ; Modena, 30 ; the Roman States, 30 ; Parma, 34 ; the Marches, 31 ; and Umbria, 27. It therefore followed that the duration of life in Italy was less than that in England. The Italians had not yet calculated the mean mortality of life, but the duration of life in Italy was about 30 years.—*Proceedings of British Association*, in *London Reader*.

Laudanum and Teetotalism.—Dr. Alfred Taylor, commissioned by the Privy Council, has sent in a Report on the means of committing murder by poisons which are allowed to exist in England. He says that poison enough to kill two adults can be purchased anywhere for threepence ; and that the careless dispensing of poisonous drugs is cause of most frightful accidents. As to laudanum, it appears to be sold wholesale, single shops often in the Marshland supplying three or four hundred customers every Saturday night. Retail druggists often dispense 200 lbs. in one year, and one man complained that his wife had consumed £100 in opium since he married. It is a mistake to consider the practice confined to the marshy districts. We do not believe there is a town in England where some one chemist does not on Saturday night load his counter with little bottles of laudanum; and we are assured by a wholesale druggist that he could and did sell it in the eastern counties to the extent of some thousands of pounds in a year. This gentleman, an old and keen observer, declared that the demand had sprung up shortly after the introduction of teetotalism, and that it would be found to vary everywhere, in accordance with the progress or decline of the system of total abstinence.—*London Spectator.*

A TRIBUTE TO THE JANITOR OF THE MEDICAL COLLEGE OF HARVARD UNIVERSITY.—A correspondent informs us that the Medical Faculty of the University have just presented to Mr. Wm. B. Andrews, the attentive and faithful Janitor of the College, a first rate chronometer watch, hunting cased and full jewelled, "Not so much as a hint of punctuality, for he is always 'up to time,' as a token of their friendly feeling and recognition of his merits."

BOSTON DISPENSARY.—We learn that there are two vacancies on the list of physicians to the Boston Dispensary—one for District 2, or East Boston, and the other for District 8, or South Boston. Candidates for the office can apply to the Secretary of the Board of Trustees, at No. 7 Court Square, room No. 21.

COUNT SCHWABE, of Germany, has generously furnished a new library and reading room to the Military Hospital at Readville. From three to five hundred of the books are taken out daily. Liberal supplies of newspapers are also gratuitously furnished the Hospital. Besides the generous donation of books made by Count Schwabe, handsome contributions have been made by others. Count Schwabe has also furnished a fine library for Dale Hospital, Worcester.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 3d, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	40	49	89
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.1	39.5	80.6
Average corrected to increased population - - - -	00	00	88.26
Death of persons above 90 - - - - - - -	0	1	1

SUBSCRIBERS in a part of the New England States will receive their bills with the present number of the JOURNAL; others, with succeeding numbers. Those who have heretofore been annually called on by a Collector, are informed that no agent has been sent out the present season for that purpose, and they will therefore confer a favor by remitting to the publishers, either in the usual manner by mail, or by the new system of money orders through their postmaster.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 3d, 89. Males, 40—Females, 49.—Abscess, 1—accident, 1—apoplexy, 2—blood-poisoning, 1—disease of the bowels, 1—congestion of the brain, 2—disease of the brain, 2—bronchitis, 4—consumption, 15—convulsions, 5—diarrhœa, 1—diphtheria, 1—dropsy, 4—dropsy of the brain, 2—erysipelas, 1—scarlet fever, 3—typhoid fever, 3—hæmoptysis, 2—hæmorrhage, 1—disease of the heart, 4—infantile disease, 2—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 3—gangrene of the lungs, 1—inflammation of the lungs, 4—measles, 1—old age, 1—paralysis, 2—peritonitis, 1—premature birth, 2—smallpox, 5—sore throat, 1—unknown, 8.

Under 5 years of age, 20—between 5 and 20 years, 18—between 20 and 40 years, 23—between 40 and 60 years, 15—above 60 years, 13. Born in the United States, 62—Ireland, 24—other places, 3.

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SOME CASES OF EXTRACTION OF CATARACT PRECEDED BY IRIDECTOMY.

[Read before the Boston Society for Medical Observation, and communicated for the Boston Medical and Surgical Journal.]

By Gustavus Hay, M.D., Boston.

The operation of extraction of cataract was introduced more than a hundred years ago. Some statistics as to its results are given in Jacobson. Out of 728 cases of Fr. Jäger, 33 unsuccessful ones; that is, 1 in 22. In 114 cases of Ed. Jäger, 7 unsuccessful ones; 1 in 16. In 540 of Arlt, 41 failures; 1 in 13. In 2073 of Rivaud-Landrau, 201 failures; 1 in 10. According to Stellwag, p. 583, one eye is generally lost out of 8 or 10, and in less favorable external circumstances often 1 in 5, or even in 3. Graefe's view is given in the *Klinische Monatsblätter*, April, 1863, p. 146. "I consider," he says, "that in a hundred flap-extractions 65 give, without further operation, a perfect result, by which I mean the attainment of an acuteness of vision of at least $\frac{1}{4}$, or, when the patient is over 75 years old, of at least $\frac{1}{6}$. Of the other 35 cases, 15 will become full successes by means of subsequent operations, either operations for secondary cataract alone, or iridectomy and such operation. Of the 20 still remaining, about a third get at least enough vision to go about alone (vision $\frac{1}{50}$—$\frac{1}{30}$), another third still less vision, and from 6 to 8 per cent. of the whole number become quite blind, * * * *." Graefe's estimate, then, would give us about 13 unsuccessful cases in a hundred, since those operations which do not enable the patient to see enough to go about alone may be considered as unsuccessful.

In consequence of the danger accompanying this operation, several modifications of it have been proposed; among these is one to do iridectomy on the eye several weeks before the extraction, thereby getting a larger opening for the passage of the hard nucleus, and making it easier for the passage of the soft cortical substance, some of which latter would otherwise be more likely to remain behind the iris, where it might cause irritation; also, the enlarged pupil would be less likely to be closed by a subsequent iritis. Possibly the iridectomy may have some further antiphlogistic effect, but on the other hand there is the irritation of an additional operation.

We propose to report nine cases in which this method was adopted, the lower section being made in all.

Case I.—Mr. W., æt. 74, American, engaged in farming, &c., came to the Infirmary Aug. 24, 1863. The *left* eye had been failing for three years, and now presented a cataract. The margin of the pupil was attached to the capsule. Tension normal. The eye hardly makes out fingers at several inches, though perception of light is good. The *right* eye, with a convex glass of 8 inches focal distance, sees some of Jäger's No. 17. There was some lenticular opacity. The pupil dilated under atropine only to about one and a half lines in diameter.

Aug. 26th.—Iridectomy downwards on the left eye.

Sept. 2d.—A large lens extracted.

Sept. 17th.—Discharged.

Nov. 5th.—The eye, with a convex glass of 4 inches focal distance, has vision $\frac{1}{10}$; reads Dyer's No. C at ten feet.

N. B.—In the following cases, we beg leave to abridge such an expression as "convex glass of 4 inches focal distance," and to write simply "convex 4."

Case II.—Mary M., æt. 75, Irish, entered the Infirmary Sept. 5th, 1863. Cataracts.

Sept. 7th.—Iridectomy (which eye, not stated).

Sept. 14th.—Extraction.

Oct. 13th.—Discharged.

Nov. 4th.—Came back, seeing pretty well. Patient not knowing the letters, the usual method of measuring the vision could not be applied.

Case III.—Elizabeth M., æt. 43, Irish, entered Oct. 26th, 1863. Cataracts. The *left* eye began to get dim five years ago, four months after third confinement; for the last six months has seen only light with it. The right counts fingers at about a foot. Patient does not know when it began to be affected, but thinks subsequently to the left. Both cataracts whitish, the opacity more pronounced in the nucleus. The cortical substance not entirely affected in either.

Nov. 16th.—Extraction; iridectomy had been done about two and a half weeks previously (which eye, not stated).

Dec. 14th.—The eye has, with convex 3½, vision about $\frac{1}{10}$; that is, reads Dyer's C at about ten feet.

Dec. 19th.—Discharged.

Case IV.—Mr. H., æt. 62, born in Spain, seaman till within about five years, entered March 14th, 1864. The right eye had a cataract, promising well. The other eye was still pretty good, enabling him to read and go about.

March 29th.—Extraction; two weeks previously, iridectomy.

April 5th.—Doing well. Lint bandage removed; shade substituted. A small bit of lens in lower part of chambers.

13th.—With convex 4 reads C at nearly twenty feet.

19th.—With same glass reads LXXX at twenty feet.

20th.—Discharged.

Nov. 11th.—The eye has been well. With convex 4 reads at twenty feet all of Dyer's XX except the letter X.

It is worthy of note here that the vision improved with time, and attained for distance nearly the standard of a sound eye, and this notwithstanding the large pupil resulting from the iridectomy downwards.

Case V.—Mr. W., æt. 54, Irish, from Maine, entered March 15th, 1864. Cataracts. The *left* had been unsuccessfully operated on with the needle a year previously. The *right*, besides presenting a well-marked cataract, was affected with spasmodic entropion of the under lid. This latter was cured by Walton's method of removing a narrow strip of skin and muscle from the outer surface of the lid, close to its ciliary border. This was done March 16th.

March 23d.—Iridectomy.

April 6th.—Extraction.

24th.—With convex $4\frac{1}{2}$, vision for distance is more than $\frac{1}{5}$.

May 2d.—With same glass, vision for distance more than $\frac{1}{3}$.

6th.—Discharged.

Case VI.—Mr. P., æt. 64, American, entered March 16th, 1864. Cataracts both eyes. Sight began to fail about two years ago, more particularly the last eighteen months. Sees light. The pupils dilate under atropine imperfectly.

April 1st.—Extraction on the left; iridectomy downwards two weeks previously.

4th.—Pupil not dilated, though atropine instilled immediately after the extraction. Atropine instilled.

5th.—Some pain in head. Some adhesions of pupil to capsule. Lint bandage put only on the left eye, omitted from the other. Patient sat up, dressed, yesterday, and took broth. May get up to-day, being uneasy in bed.

24th.—With convex $4\frac{1}{2}$, vision for distance not quite $\frac{1}{5}$.

May 2d.—With convex 4, vision $\frac{1}{4}$ at fifteen feet.

5th.—Discharged.

Nov. 1st.—Heard from; had been seeing well.

Case VII.—Mr. W., æt. 61, American, entered April 11th, 1864. The *left* eye presented a whitish cataract. Its sight had been failing for eight years. In favorable light sees with it to count fingers. Tension not increased. The *right* shows some lenticular opacity. Fundus seen only indistinctly. No hardness of ball. Its vision after dilatation of pupil only $\frac{1}{25}$.

April 20th.—Iridectomy downwards on the left eye. About a week after the iridectomy there appeared, unexpectedly, ecchymosis of the ball just below the incision, and some blood in the anterior chamber, near the incision, supposed at the time to be owing to patient having hit himself in the night.

May 9th.—The ecchymosis nearly, if not quite, disappeared. Lens extracted at 1, P.M. At 2, P.M., violent pain in eye, lasting till 6. Then colic, with great pain, all night.

May 10th.—Iritis. Cornea hazy.

10th, P.M.—Pain nearly gone. Some pus along edges of wound. Conjunctiva and upper lid somewhat swollen. Compressive bandage removed. Simple covering of linen or cotton substituted.

11th, P.M.—Lid and conjunctiva more swollen. Cornea looking as if suppurating over a considerable space near the wound. Pain continues diminished. Atropine instilled three times during the day.

15th.—The eye has steadily gone on to suppuration. To-day, a plug of pus in position of the cornea. Swelling of conjunctiva and upper lid greater than heretofore. Quinine, one grain, twice daily. Morphine, if in pain. Broth, meat and bread.

26th.—Swelling of eye diminished, but erysipelatous swelling of nose and parts adjacent. Tr. ferri chlorid., gtt. x., three times daily.

28th.—Improving. Some time afterwards, discharged.

Case VIII.—Mr. A., æt. 64, American, feeble, pale, entered Aug. 22d, 1864. Has been taking iron since July 13th. Ripe cataracts.

Aug. 24th.—Iridectomy downwards (not stated, which eye).

Sept. 7th.—The anterior capsule was slightly opened by passing a needle through the cornea, with a view to diminish somewhat the size of the lens, which seemed very large.

26th.—Lens extracted, slipping out quite easy, perhaps partly in consequence of the preceding opening of the capsule.

27th.—Doing well.

Oct. 24th.—Four weeks from operation; with convex 4½, has vision nearly $\frac{1}{5}$. Vision impaired by conjunctivitis with partial ectropion of both lower lids.

28th.—Discharged.

Case IX.—Mrs. L., æt. 58, American, feeble, entered Infirmary Sept. 27th, 1864. Cataracts, not quite ripe. The eyes began to fail sixteen months ago. Has had considerable pain in eyes and head.

Sept. 28th.—Iridectomy downwards on left eye, the cataract of which is the more advanced.

Oct. 12th.—Extraction. The cataract had considerable soft cortical substance.

14th.—Opened eye. Some undissolved cortical substance. Atropine instilled.

Nov. 10th.—With convex 3½, has vision $\frac{1}{5}$ at twenty feet.

15th.—Discharged.

The following table will give a summary of the above cases:—

Case.	Age.	Interval between Iridectomy and Extraction.	Result.
I.—Mr. W.	74	1 week.	33 days after extraction, vision one tenth.
II.—Mary M.	75	1 "	51 " " " " pretty good.
III.—Mrs. M.	43	2½ "	28 " " " " about 1-10th.
IV.—Mr. H.	62	2 "	7 mos. 13 days " " nearly 1.
V.—Mr. W.	54	2 "	26 days after " " one third.
VI.—Mr. P.	64	2 "	31 " " " " one fourth.
VII.—Mr. W.	61	19 days.	6 " " " panophthalmitis.
VIII.—Mr. A.	64	33 "	4 weeks " " vision nearly 1-5.
IX.—Mrs. L.	58	2 weeks.	29 days " " " one fifth.

CASE OF GLAUCOMA OF MORE THAN THREE MONTHS STANDING; IN WHICH EVEN PERCEPTION OF LIGHT HAD BEEN LOST; SUCCESSFULLY TREATED BY IRIDECTOMY.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

By Henry W. Williams, M.D., Ophthalmic Surgeon of the City Hospital, Boston.

Mrs. ——, æt. 58, was suddenly attacked, on the 2d June, 1864, with what was supposed to be intense neuralgic pain in the right eye, which was quickly followed by loss of sight. Two weeks later, similar symptoms began in the left eye; but the pain was here less violent and vision was more gradually lost.

An appointment was made for consulting me about the middle of August, at which time she could still perceive a person's features with the left eye; but owing to an attack of illness she postponed her visit, having no idea that loss of time would be of any consequence. I therefore did not see her until the 20th of September, nearly sixteen weeks from the first invasion of the disease. At this time she was brought to me by her physician, to all intents and purposes entirely blind. With the right eye she could not distinguish light; with the left she could merely discern the position of the window, but could not perceive the shadow of my hand when passed between her eye and the light. Both eyeballs were very hard to the touch, the pupils were dilated, and the iris somewhat pushed forward. The right cornea had no sensibility when touched with a probe; the left retained a slight degree of sensitiveness. There was some, but only moderate enlargement of the vessels situated between the conjunctiva and the sclerotica, but no other abnormal vascularity. The severe pain attending the onset of the disease had subsided.

The ophthalmoscope showed a slight degree of cupping of the papilla, with distortion of the retinal vessels, in both eyes; but less than would have been expected from the degree of hardness. In the right eye cloudiness of the lens was beginning to be developed, though not as yet in a sufficient degree to prevent a view of the fundus of the eye.

After consultation, we recommended iridectomy; telling the patient we did not think it probable, but only possible, that any recovery of vision would be obtained; but that we deemed the operation harmless in itself, and thought it should be tried, as the sole resource; especially as it would in all likelihood prevent the recurrence of the agonizing pain she had already endured, even if she gained no other advantage from it.

The patient was placed under the influence of ether, and iridectomy was performed upwards in both eyes. The eyes were then covered with a compress and bandage, and she was taken to her home, about twenty miles distant, whilst still only half conscious.

The next day her physician wrote me as follows:—" At 8 o'clock this morning, with fear and trembling, I removed the bandage from her eyes. To my astonishment she exclaimed, 'I see all your features, even the wrinkles in your forehead.' It seemed to me miraculous."

On the 26th November, I again saw Mrs. ——. She stated that she saw less well than during the fortnight subsequent to the operation, but could see more clearly with her husband's glasses.

Examination with the ophthalmoscope showed an apparently healthy fundus; with no cupping of the optic papilla or deflexion of the retinal vessels. The opacity has disappeared from the lens of right eye.

On testing her vision with convex glasses, I found that she saw large objects with distinctness with 18 inches radius, and with a glass of 10 inches could read the fine print of a newspaper.

This case is remarkable for the great success obtained under conditions which seemed in the highest degree uufavorable. So far as I have observed, no instance has previously been recorded where acute glaucoma had existed for more than three months, caused complete loss of perception of light, and yet been entirely relieved by this invaluable operation. It certainly should encourage us not to despair of good results in cases which might hitherto have been deemed desperate and quite beyond the hope of relief by surgical treatment.

15 *Arlington Street*, 28*th Nov.*, 1864.

ON THE PHYSIOLOGICAL EFFECTS OF TOBACCO.

By Dr. Richardson.

This paper is a very valuable addition to the literature of smoking, dealing with the composition of the products of combustion of tobacco, the physiological action of the various compounds thus derived, and the effects of ordinary and excessive smoking on the organs of the body. The following bodies are products of the combustion of tobacco:—1, water; 2, free carbon; 3, ammonia; 4, carbonic acid; 5, an alkaloidal principle called nicotine; 5, an empyreuamtic substance; 7, a resinous bitter extract. The water is in the form of vapor; the carbon is in the form of minute particles, suspended through the water vapor, and giving to the eddies of smoke their blue color; the ammonia is in the form of gas combined with carbonic acid; the carbonic-acid gas is partly free and partly in combination with ammonia. The nicotine is a non-volatile body, an alkaloid which remains in the pipe; the empyreumatic substance is a volatile body, having the nature of ammonia, but the exact composition of which is as yet unknown. It is this that gives to the smoke its peculiar odor; it adheres very powerfully to woolen materials, and, in the concentrated form, is so obnoxious as almost to be intolerable. The bitter extract is a resinous substance, of dark color, and of intensely bitter taste. It is, probably, a compound body, having an alkaloid as its base. It is not volatile, and only leaves the pipe by being carried along the stem in the fluid form. The greatest variations exist in various kinds of tobacco. Simple tobacco that has not undergone fermentation yields very little free carbon, much ammonia, much carbonic acid, little water, none, or the smallest possible trace of nicotine, a very small quantity of empyreumatic vapor, and an equally small quantity of bitter extract. Latakia tobacco yields these same products only. Bristol bird's-eye yields large quantities of ammonia, and very little nicotine. Turkish yields much ammonia. Shag tobacco yields all the products in abundance, and the same may be said of pure Havana cigars. Cavendish varies considerably; some specimens which are quickly dried are nearly as simple as Latakia; other specimens which are moist yield all the products in great abundance. Pigtail yields every product most abundantly. The little Swiss cigars yield enormous quantities of ammonia, and Manillas yield very little.

The physiological effects of these compounds are as follows:—The water vapor is innocuous; the carbon settles on the mucous membrane, and irritates the throat. The carbonic acid is a narcotic, if it be received into the lungs. The ammonia causes dryness and biting of the mucous membrane of the throat, and increases the flow of saliva; absorbed into the blood, it renders that fluid too thin, causing irregularity of the blood corpuscles; it also causes, when absorbed in large quantities, suppression of the biliary secretion and yellowness of skin; it quickens and then reduces the action of the heart, and, in young smokers, it produces nausea. The empyreumatic seems to be almost negative in its effects, but it gives to the tobacco-smoke its peculiar taste; and it is this substance that makes the breath of confirmed smokers so unpleasant. Nicotine is scarcely ever imbibed by the cleanly smoker; it affects those only who smoke cigars by holding the cigar in the mouth, and those who smoke dirty pipes saturated with oily matter. Its effects when absorbed are very injurious; it causes palpitation, tremor, and irregular action of the heart; tremor and unsteadiness of the muscles generally, and great prostration. It does not, however, produce nausea or vomiting. The bitter extract is the cause of vomiting and nausea when it is absorbed; both it and the nicotine are always received into the mouth in solution, and produce their effects, either by direct absorption from the mouth, or by being imperceptibly swallowed and taken into the stomach.

The greatest difference arises from the manner of smoking. Those who use clean, long pipes of clay feel only the effects of the gaseous bodies and the free carbon. Wooden pipes and pipes with glass stems are injurious. Cigars smoked to the end are most injurious of all. To be safe, a cigar ought to be cast aside as soon as it is half smoked; and every cigar should be smoked from a porous tube. Cigars, indeed, are more injurious than any form of pipe; and the best pipe is unquestionably what is commonly called a "churchwarden," or "long clay." After the clay pipe, the meerschaum is the next wholesome. A pipe with a meerschaum bowl, an amber mouth-piece, and a clay stem, easily removable or changeable for a halfpenny, would be the beau ideal of a healthy pipe. A man may, by practice, become habituated to a short foul pipe, but he never fails to suffer from his success in the end, nor, unless the habit of actual stupefaction be acquired, is any pleasurable advantage derived.

The effects of moderate and immoderate smoking on the organs of the body were stated to be as follows:—In an adult man, who is tolerant of tobacco, moderate smoking—say to the extent of three clean pipes of the milder forms of pure tobacco in the twenty-four hours—does no great harm. It somewhat stops waste, and soothes; but there are times when it unsettles the digestion. To an immoderate degree—say to six or eight pipes a day, especially if strong tobacco and fine pipes be used—smoking is unquestionably very injurious to the animal functions. The blood is made too fluid; the biliary secretion is arrested; and the digestion is constantly deranged; there is dryness of the tongue and frequent nausea. On the heart the symptoms are very marked. They consist of palpitation, a sensation as though the heart were rising upwards, a feeling of breathlessness, and, in bad cases, of severe pain through the chest, extending through the upper limbs. The action of the heart is intermittent, and faintness may be experienced. Extreme smoking is also very injurious to the organs of sense. In all inveterate, constant smokers, the pupils of the eye are dilated, owing to the absorption of nicotine, and the vision is impaired in strong light; but the symptom which most of all affects the vision is the retention of images on the retina after the eye is withdrawn from them. Thus, if he turn his eyes from a window, he retains the impression of the window, the panes seeming red and the bars dark. When such pictures are seen for some minutes, the smoker may be assured that he has carried his indulgence out of the pale of safety. On the sense of hearing inveterate smoking produces disturbances; these consist of restless deafness, and ringing or whistling in the ears. The circulation of the brain is also sometimes disturbed, and giddiness and vertigo are produced. The muscles, after extreme smoking, are prostrated. Long smoking also affects the mucous membrane of the mouth, causing "smoker's sore throat." There are also other effects occasionally produced in the mouth—viz., sponginess of the gums and tartar on the teeth. On the whole, however, smoking does not injure the teeth. These are the worst effects of tobacco; they all point to functional disturbance. The question remains whether worse effects ever follow from over-indulgence in smoking. The great effect of tobacco is to arrest the functional processes on which growth and development depend. To the whole body of the growing youth, therefore, the act of smoking is decidedly deleterious. Dr. Richardson could not dwell too forcibly on this point. He did not say that any one particular disease was brought on, but that a general deficiency of power was induced. When, however, the body has ceased to grow, the effects of tobacco in this regard were not felt; and, when the body was falling into decay, smoking seems conservative in its action. The author had met many instances of extremest old age in confirmed smokers. As regards the production of specific diseases by tobacco, the hypotheses that have been raised are too loose to be accepted. It is said that tobacco dulls and destroys the mental faculties. The facts are that, when the body is in full vigor, smoking does lessen the power of the faculties; but, when the body is overworked and worn, tobacco soothes and conserves. If there were any foundation in the idea that tobacco produces insanity, the fact would be at once broadly marked in the difference of numbers of the insane in the different sexes. This remark is, however, less applicable to paralysis. It has been urged that tobacco produces cancer; the statement is utterly groundless. Neither consumption nor bronchitis, in the chronic form, can be induced primarily by smoking. At the same time it must be added that smoking does mischief in both these disorders when they exist, except in asthma. In the main, smoking is a luxury which any man is better without. Of nearly every luxury, tobacco is the least injurious. It is innocuous as compared with alcohol; it does infinitely less harm than opium; it is in no sense worse than tea, and, by the side of high living, altogether contrasts most favorably.—*Proceedings of the British Association,* in *London Reader.*

The German journals announce the death of Heinrich Müller, Professor of Medicine at Würzburg. He was cut off by erysipelas. Also died, on May 13th, at Göttingen, Rudolph Wagner, the well-known physiologist.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

DEC. 12th.—*Imperfect and Irregular Sexual Development.*—Dr. JACKSON reported the following case.

"I have recently had an opportunity, by the kindness of Dr. Brinkerhoff, Surgeon of the U. S. Naval Rendezvous in this city, to see the subject of this case, and there are now before the Society casts in plaster that show the appearance of the genital organs and of the breasts. The case of this man, if he is a man, was published in the Boston Medical and Surgical Journal for Nov. 28th, 1861, by Dr. I. W. Bragg, of the U. S. Navy, whose sad death at the South has only been recently announced, and in his report are some details not here referred to. As Dr. B. states, the contour of his limbs is most remarkably feminine, and his breasts are identical with those of a virgin. His skin has the delicacy of an infant's, and he has no trace of beard. I found, however, more than a 'few scattering appendages" of hair upon the pubes. The penis is 1½ inch long and ⅝ inch in diameter. The glans feels, proportionally, rather large; and it can be about one half uncovered by retraction of the prepuce, this last being then arrested as if by adhesion to the organ. The urethra is quite natural, and he says he can pass as large a stream of water and throw it as far as any man. Dr. B. felt the two testicles, 'about the size of a large pea, and in the region of the external rings'; I could feel only one, and that was upon the left side and nearer the pubes. Dr. B. further says, 'He represents that he is capable of coition with females, and that his feelings sometimes prompt him to indulge. His penis is capable of erection, and, he states, of emission of semen.' This is a most interesting point in his history, and I therefore questioned him again and again in regard to it, using at the same time every means to induce him to tell the truth; and the following statement he adhered to firmly—that his penis is capable of erection, but that he scarcely ever had any sexual feeling, and that he had never had connection with a female—that he never had polluted himself, and that he never has had a seminal discharge."

AUG. 8th.—*Tumor over the Sternum.*—Dr. HODGES reported the case. The patient, a woman 35 years old, entered the Mass. Gen. Hospital July 28th, for a tumor over the sternum, and near the cartilage of the fifth rib, on the left side. It appeared four months before her entrance, after a hard day's work, and was of the size of an English walnut. It followed no blow or injury, though the patient had been in the habit of lifting heavy weights. It had never been the seat of pain. At its inception it seemed to rise at once, and to disappear as suddenly after five or ten minutes, and in this way, according to the patient's statement, continued to come and go. She was always made conscious that it was commencing to rise by feeling a sensation like the prick of a pin. On Monday, July 25th, it re-appeared, and, contrary to custom, had remained ever since. It was smooth, round, elastic and movable, and seemed to be, to some extent, reducible in size by pressure. The integument over it was natural.

On removal, the tumor proved to be a coagulum of blood, contained in a cavity with smooth walls, like those of a cyst. One small vessel was tied. The patient returned home on the day of the operation, and had not since been heard from.

If this patient's account of the phenomena and history of this tumor is to be received as correct, it is difficult to determine its origin, except by supposing it a dilated vein from which the stream of blood had been shut off, and within which the blood had coagulated at the time the tumor assumed its permanent character. Such cases are mentioned by Paget, Surg. Path., Am. Ed., p. 348.

Aug. 8th.—*Removal of Superior Maxillary Bone; rapid Recovery.* Dr. Hodges reported the case.

A female, æt. 32, entered the Mass. Gen. Hospital, Aug. 2d, with disease of the superior maxillary bone. Aug. 4th, the entire bone was removed by the usual operation. Aug. 9th, the patient was sitting up, and Aug. 15th she was discharged to return to her home in Maine, the external wound entirely healed, and the internal one nearly so.

The case is mentioned on account of the rapid convalescence from so severe an operation.

Oct. 24th.—*Large Tumor of the Neck.*—Dr. Hodges showed the specimen.

The patient was an unmarried woman, 25 years old, who entered the Mass. Gen. Hospital, Oct. 19th. She had a large tumor of the neck, which, when first noticed, twelve years ago, was not bigger than a pea, and was about two inches from the symphysis of the lower jaw, on the median line of the neck. It grew slowly until the beginning of the present year, when it commenced increasing rapidly in size. At her entrance to the Hospital it measured twelve inches from side to side, and seven inches from the symphysis of the chin to the front of the neck. It occupied the whole front of the throat, though developed a little more on the left side than on the right. It was smooth, and free from lobes; uniform in aspect and consistency; without discoloration of the skin; elastic to the touch, and but little movable. Its immobility seemed, however, to be due more to its size, and the tension of the skin, than to any adhesions which it had formed. Patient had no difficulty in swallowing, and no discomfort from its pressure on the throat; in fact, suffered no inconvenience, except from the weight of the tumor, which was so great as to compel her to carry it in a net. Catamenia, bowels, appetite, sleep and strength were good. Had a rather anæmic aspect. Her grandmother died of cancer.

The tumor was exposed by a transverse incision, and was removed, so far as the dissection was concerned, without any great difficulty. The hæmorrhage, however, was profuse, and required that the vessels, chiefly veins, should be tied as they were cut. The number of ligatures applied was not recorded, but at the dressing, on the 27th, twenty-one were removed. In a portion of the dissection the blood seemed to ooze from the whole surface of the capsule from which the tumor was stripped, and was with difficulty controlled. In fact, in the afternoon of the operation the patient had to be re-etherized, and several vessels were tied. The loss of blood left her in rather an exhausted condition, and for a day or two the swelling of the parts involved in the large wound caused so difficult deglutition that enemata of beef-tea and brandy were given. She soon rallied, however, and was discharged from the Hospital, in the middle of November, in excellent health, and with but an insignificant trace of the extensive wound which had been made.

The tumor, on section, consisted of a single mass of glandular substance, containing three large cysts filled with fluid blood.

Dr. Hodges said he had noticed the peculiar form of hæmorrhage above spoken of in the removal of two other tumors of the thyroid region. The tumors peeling out, as it were, from a bed of healthy thyroid tissue, were followed by an active hæmorrhage from the whole surface, and not from any one particular point. In each case it was necessary to include in a ligature *en masse* large portions of the bleeding surfaces.

Nov. 14th.—*Horn of Lower Lip.*—Dr. HODGES showed the specimen.

The patient, a man aged 31, entered the Mass. Gen. Hospital, Oct. 29th. Nine years ago a horn commenced growing on the prolabium of his lower lip. Three years after having reached its present size it was removed by operation, of which an obvious scar remains. It however soon re-appeared, and had steadily grown till it was now an inch high and one fourth of an inch in diameter; and by its side was a smaller horn, of about one third the height of the larger one. Removed by a V-shaped incision. The lip around it was healthy. Patient had an aunt who had a horn of the side, which was removed by operation.

This case seems to add confirmation to the relation between horns and epithelial cancer, which has been pointed out by Paget (p. 568).

Nov. 14th.—*Croup; Recovery without Operation.*—Dr. JOHN G. BLAKE reported the following cases.

"Mary M., aged 6 years, and Anna M., aged 3 years, were seen by me, in the early part of last month, at their home in a small court at the South End. The elder child had been for three or four days suffering from cough, hoarseness and difficulty of breathing, for which some simple expectorant had been given by her mother, but without relief. I found the little girl with well-marked symptoms of membranous croup, and failing to get the mother's consent to remove her to the City Hospital, adopted the treatment which I had found most successful in similar cases. For this purpose a small room was prepared, and heated to about 80°, and the atmosphere kept charged with the moisture from boiling water. At times the temperature was allowed to sink to 70°, but never below that. The following was ordered at my first visit:—Pulv. ipecac., gr. ss. every hour. Pulv. Doveri, gr. i. every three hours while patient was awake. Nourishing diet of beef-tea, arrowroot and milk.

"Next day, not much change. Cough frequent, hard, ringing; no expectoration; countenance moist and pallid; pulse 130. Took a moderate quantity of food, and slept at short intervals during the night. The ipecac was exchanged for the following mixture:—Syr. scillæ, syr. senegæ, syr. ipecac., aa. f℥ss. M. Half a drachm every hour; if nausea be produced, the dose to be diminished. Dover's powder to be continued.

"Dec. 7th.—The same. The next day she was better, cough not so loud and hard. A piece of something resembling the 'skin of a potato' had been coughed up, which the nurse allowed to dry on a board, as the best means of preserving it for my examination. I found a small piece of false membrane, half an inch long and nearly as broad, and gave directions to have any more that might be expelled kept in a cup of cold water till I had seen them at my next visit. While I was in the room the child had a violent paroxysm of coughing, and coughed up a small quantity of white frothy mucus, in which small fragments of membrane were seen. Pulse, after coughing, 132; skin warm and moist; bowels regular. Takes food, and wine, water and milk. On the following day several pieces of membrane were expelled, and the little girl seemed brighter and stronger. The same treatment was continued on the following two days, and with the same result—membrane thrown out in small pieces, some of them tubular, and others irregular or square.

"The second child was now brought to my notice, with the same symptoms in a milder form, but still unequivocal, as her older sister presented when I first saw her. She was introduced into the sick room, and put upon the same general treatment, the doses being lessened to her age. After two or three days she began to throw out pieces of membrane, perfect casts of the tubes, and her improvement was quite rapid. Unfortunately, the bottle containing several of the largest pieces was accidentally broken, and only half a dozen of the smaller ones were saved. The steam was continued for ten days, and then gradually diminished, the breathing having become by this time tolerably free, and on the fourteenth it was entirely withdrawn. The nourishing diet, stimulants and expectorants were continued, the two latter in smaller quantities. At the end of the third week both children were entirely recovered from the disease, and excepting a little paleness looked quite well. The citrate of iron and quinine, in one- and two-grain doses, three times daily, was prescribed, and all other medicines discontinued; generous diet to be continued, and outdoor exercise when the weather permitted.

"When last seen, both were perfectly well."

Dr. Blake showed a portion of the false membrane which had been coughed up by these patients.

Dr. Cabot thought that ipecac and Dover's powder, though apparently serviceable in these diseases, really did harm by diminishing the vital power, the preservation and support of which he considered the most important element of success in the treatment.

Dr. Fifield asked if any gentleman had operated for croup in diphtheria?

Dr. Cabot had operated in several instances of such complication; once with success.

Dr. Fifield had seen a child at Quincy, a fortnight ago, with diphtheria, whose throat appeared to be quite filled with false membrane.

Dr. Cabot had lately seen some cases of diphtheria in which there was much sloughing in the throat. One was that of a young lady, 21 years old, who had been ill ten days when he first saw her. A slough was hanging from her throat, and around it was a regular diphtheritic deposit. The patient lived two weeks in this state, a large slough having separated just before her death. One of the nurses of this patient took the disease, and had sloughing of the throat, followed by paralysis of the muscles of deglutition and articulation. In another case, when seen, an abscess had burst in the throat, and four days afterwards there was a diphtheritic deposit, followed by extensive sloughing.

Dr. Borland had seen an old woman with diphtheria, in whom the disease was followed by extensive sloughing of the soft palate.

Nov. 14th.—*Case of Diabetes successfully treated by Bran.*—Dr. Gould reported the following case.

T. V., æt. 57, carpenter, about the first of July began to lose strength, and to notice unusual thirst; in August became so weak as nearly to give up labor; urine frequent, and disturbing him at right. In the beginning of September, applied for advice. Skin dry and harsh; thirst excessive; mouth parched; strength greatly diminished; emaciation strongly marked; countenance and eye inexpressive. Urine, about sixteen pints daily, amber color, passed about four times during the night, and twice as often as usual during the day; by evaporation gave a very large amount of syrup; analysis by a chemist gave a "large amount of sugar." Gave up work; was instructed to abstain as much as possible from drink, which was to be milk or water with a little ginger. Diet—meat, milk, eggs, oysters; bread made of wheat bran and eggs. In addition, he took ten drops of tincture of chloride of iron with his meals.

Oct. 23d.—Urine again analyzed; amber colored; urinous odor; acid reaction; sp. gr. 1.018; urea normal; no albumen; a large deposit of oxalate of lime and uric acid; *no sugar detected;* thirst much diminished; micturition about half as frequent; strength improving.

Nov. 8th.—No sign of sugar; has resumed labor, and is free from unusual thirst; perspires freely. Allowed him to resume a restricted vegetable diet.

Bibliographical Notices.

Therapeutics and Materia Medica. A Systematic Treatise on the Action and Uses of Medicinal Agents, including their Description and History. By Alfred Stille, M.D., Professor of the Theory and Practice of Medicine in the University of Pennsylvania, &c. Second Edition, revised and enlarged. In two volumes. Philadelphia: Blanchard and Lea. 1864.

The Book of Prescriptions, containing 3000 *Prescriptions, collected from the practice of the most eminent Physicians and Surgeons, English, French and American. Comprising, also, a compendious history of the Materia Medica, lists of the Doses of all Officinal or established Preparations, and an Index of Diseases and Remedies.* By Henry Beasley. Philadelphia: Lindsay & Blakiston. 1865.

Essays on Infant Therapeutics. By John B. Beck, M.D., Professor of Materia Medica and Medical Jurisprudence in the College of Physicians and Surgeons of the University of the State of New York.

Third Edition, enlarged and revised. New York: William Wood & Co. 1864.

Alcohol: its Place and Power. By JAMES MILLER.
The Use and Abuse of Tobacco. By JOHN LIZARS. Philadelphia: Lindsay & Blakiston. 1865.

IN no branch of medicine are there such frequent changes, we do not say advances, as in that of materia medica, and as long as anything is left for chemistry to discover or create in earthly elements, or any spot of this globe remains unsearched by the botanist, so long must the written history of this subject be unfinished. So it happens that the passage of a few years even places the most complete work behind the present state of knowledge, and makes the issue of new editions a constantly recurring necessity. But so active are the workers in this field of experimental science, that it seems almost a hopeless task for the writer to attempt more than the record of the results of such labors. We thought that the chemistry and physiological action of the principles of opium, at least, were by this time well settled, and that of so old a drug perhaps we might say, its history is complete; but even before the volumes before us have been publicly reviewed, behold we hear it announced that an entirely new element has been eliminated from this substance, and one which promises to be of almost as much importance as any of those previously known.

The first work upon our list is already too well known to need an extended notice from us. It has held, from its appearance in 1860, the place it so well deserves, that of the best treatise on therapeutics in the English language. As a work on materia medica especially it cannot claim so high a rank, and although we do not expect such a book' to take the place of a Dispensatory, still we think that the little space given to the description and natural history of drugs is a great defect. The author appears to have thoroughly explored the field of modern medical literature, and but few of the latest remedies seem to have escaped observation, although his object seems to be to devote his pages chiefly to the thorough examination of those most in use. No original experiments or investigations are given, nor could they be expected perhaps in such a work, but the reviews and compilations of the labors of others appear to us to be most carefully and judiciously made. The chapters devoted to the consideration of many of our most important remedial agents, as cinchona, iron, tartar emetic, mercury, heat, &c., are exceedingly valuable and deserve the highest praise. We do not feel satisfied, however, with the general arrangement of the work. It seems to us that we really know too little of the physiological action of drugs to attempt to divide and arrange them on such a plan, and it is far more convenient, especially in an edition of two volumes, and less likely to mislead, to place them in simple alphabetical order. It is impossible to turn over a hundred pages without recognizing how difficult it is to determine under which class a particular drug should be placed. Take, for instance, sulphur. We find it under the head of evacuants, and yet its most important uses are not of this character. We would call the attention of the author also to a trifling error in the text in connection with this same substance. The preparation used in the treatment of scabies, which he attributes to Dr. Bourgignon, belongs, if we mistake not, to Vleminckx, military director of the Belgian army. A considerable amount of new matter has been added to this edition without increasing its bulk, and its general appearance is all that could be desired of a work which should find a place in the hand library of every student and physician.

The book of prescriptions by Beasley is the best of its class we have seen, and we can recommend it to physicians as a convenient work of reference when in haste or when the stock of remedies, upon which they usually rely, has been exhausted by a long and defiant case. It contains undoubtedly a valuable store of prescriptions, which may be studied with advantage to our knowledge of compounding and prescribing, and many useful tables of signs, abbreviations, &c. Under iron, for instance, we find 107, and under mercury 116 different recipes recommended by celebrated physicians for the cure or relief of various diseases. We always fear, however, that in this practical age such books may be made to take the place of more elementary and solid treatises, and that the physician may use such "ponies" unwisely. Its employment by students we would "taboo" in the strictest manner until they could explain the use of each ingredient in every one of the 3000 recipes it contains. We have seldom seen a handsomer medical book. The paper and type are both beautiful.

The little volume on infant therapeutics, like many other good things, is far exceeded in size by its value. Its table of contents embraces the following subjects:—On the effects of opium on the young subject, on the effects of blisters on the young subject, on the effects of emetics on the young subject, on the effects of mercury on the young subject, on the effects of bloodletting on the young subject, observations on ergot, an account of the use of mercury in inflammatory complaints, on the deaths from poisoning in New York during the years 1841, '42, and '43. These matters are all discussed in a concise and impressive manner by their distinguished author, and should be carefully studied and remembered by the young practitioner.

The publishers of the last work on our list have connected in one small volume the treatise of Prof. Miller on alcohol, prepared for the Scottish Temperance League, and the brochure of Dr. Lizars on tobacco, with the hope that they may prove "an estimable blessing to the thousands of the present generation, who are daily falling victims to the abuse of these substances." They are both well known to the public, and although in a popular form are written with fairness. The conclusions of both authors are entirely corroborated by the most recent investigations concerning the nature and effects of these articles.

NOVEL MUSEUM.—Dr. Bonialski, the Russian anatomist and surgeon, lately celebrated his fiftieth anniversary of service in the Russian Army by presenting to the Medical Academy of St. Petersburg his unique collection of surgical instruments, gathered with skill and patience during half a century, and containing more than 3000 objects. The collection forms a remarkable museum, where the progress in surgery during the present century can be studied with advantage.—*London Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 15, 1864.

Gunshot Wounds and other Injuries of Nerves.—It was one of the wise projects of the late Surgeon-General to bring together in special hospitals, or in distinct wards of the larger hospitals, certain classes of diseases or injuries, in order that the patients suffering from them might have the benefit of the superior skill which naturally results from the exclusive devotion of the physicians having them in charge to a single class of cases. No enlightened physician now-a-days disputes the advantages of the study of specialties in medical science. In fact, nearly all of the advance in positive medical science at the present time is the result of the persevering labor of specialists—the application of the division of labor in our profession, which in all the other departments of human industry has accomplished such important results. In carrying out this plan, the Surgeon-General organized, in May, 1863, a special hospital for nervous diseases. Certain wards in the Christian Street Army Hospital, Philadelphia, were assigned for this purpose, and placed under the charge of Drs. S. Weir Mitchell and George R. Morehouse, Acting Assistant Surgeons U.S.A., to whom Dr. William W. Keen, also of the same rank, was subsequently added as resident surgeon. It was soon found, however, that it was advisable to admit patients suffering from injuries to the nerves as well, and the result was that in a short time they outnumbered those for whom the institution was originally intended. Of all the cases to be found in our military hospitals surely none are more worthy of isolated study and treatment than those for whom this judicious provision was made. Such is the obscurity of these cases often, so prolonged and patience-wearying are they, so liable to expose the sufferer to the charge of malingering, so difficult of treatment, so often mal-treated, and at the same time causing to the patient frequently the most distressing suffering, that they urgently demand the most concentrated and untiring assiduity on the part of the attending physician. We congratulate the country and the profession that in the present instance the responsibility of caring for patients of this class has fallen into such trustworthy hands.

This hospital became at once a field for the most interesting study and observation. Every variety of nerve-injury presented itself, "from shot and shell, from sabre-cuts, contusions and dislocations;" and phenomena, which as they occur in isolated cases are regarded as extremely rare and curious, were multiplied to such a degree as to lose the character of novelty. The opportunity thus presented was not lost on the gentlemen to whom this responsible charge was confided, and we have the first published results of their observations in a modest pamphlet of nearly two hundred pages, which must be looked upon as a most rare contribution to pathological knowledge.* They found themselves in a hitherto unexplored field. To use their own words, " never before in medical history had there been collected for study and treatment so remarkable a series of nerve-injuries." The text-books on military surgery they found to be almost silent on the subject of these injuries, or they only regarded them as professional curiosities or hopelessly incurable. Thus they were thrown almost entirely on their own resources, and they may well congratulate themselves at the fortunate result which so often rewarded their persevering and intelligent benevolence. With well-earned satisfaction they are enabled to say, " No class of cases with which we have been called upon to deal seemed to us, at one time, so sadly hopeless as injuries of nerves ; none has better rewarded enduring and steady efforts to afford relief. We look back with unfeigned pleasure upon the great number who came to us despairing cripples, and have left us eased of pain, and either entirely well or so far aided as to enable them to employ their limbs in useful occupation."

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* Gunshot Wounds and other Injuries of Nerves. By S. Weir Mitchell, George R. Morehose, and William W. Keen, Acting Assistant Surgeons U.S.A., in charge of U.S.A. Wards for Diseases of the Nervous System, Turner's Lane Hospital, Philadelphia. 12mo., Pamphlet. Pp. 164. Philadelphia: J. B. Lippincott & Co. 1864.

The number of cases treated has been about one hundred and twenty, and they have been the subjects of the most careful study and patient treatment, full notes having been kept of all of them. The result is the unique publication before us. The division of the whole subject by the authors shows much careful consideration and method, and indicates the practical bearing and importance of their observations. It is as follows :—

Primary Effects of Wounds and other Injuries of the Nerves.
Injuries of Nerve Centres.
Injuries of the Sympathetic Nerves.
Wounds of the Fifth and Seventh Nerves.
Injuries of Nerve-trunks or branches, and their results, including—
  Alterations of Nutrition.
  Lesions of Sensation.
  Lesions of Motion.
  Alterations of Calorification.
  Electric condition of the parts.
Treatment of Nerve Lesions.

Each subject is treated in turn, and illustrated by cases selected as specially bearing on the subject in hand. The whole book is extremely interesting as a clinical record, each case being made the subject of careful discussion. Its practical value can hardly be over-estimated. It must lift off many a burden from the over-tasked military hospital surgeon, who in the midst of the multiplicity of the cases submitted to his charge can seldom have the time for the patient investigation of those which it treats of, and who will here find the light which he so much needs.

Messrs. Editors,—With the view of making the list of Permanent Members of the American Medical Association a correct one, the undersigned desires information from the members relative to any changes or deaths which may have occurred since the publication of the volume for 1863. Response should be made immediately, as the new volume is nearly ready for the binder.

Wm. B. Atkinson, M.D.,
Philadelphia, Dec. 8th, 1864. *Permanent Secretary.*

CORRECTION.—Our attention has been called to a palpable anatomical error in the third case of hernia reported in this JOURNAL last week. The mistake, which arose from careless composition, occurs in the account of the operation, as follows :—" The intestine could be felt above Poupart's ligament, evidently continuous with that in the sac, but encircled by a rigid band. This was the falciform border of the saphenous opening, &c." Of course it was meant that although the finger passed above Poupart's ligament through the dilated crural ring, and felt the bowel through the peritoneum, yet the "rigid band," "the seat of the stricture," *was below Poupart's*, at the saphenous opening.

D. W. C.

CONNECTICUT STATE DENTAL ASSOCIATION.—A convention of the dentists of Connecticut, held at Hartford, October 20th, 1864, resulted in the formation of a State Society under the above name, with the following list of officers :—

President, Dr. A. Hill, of Norwalk. *Vice President*, Dr. W. W. Sheffield, of New London. *Recording Secretary*, Dr. James McManus, of Hartford. *Corresponding Secretary*, Dr. Leroy D. Pelton, of Hartford. *Treasurer*, Dr. E. E. Crofoot, of Hartford. *Librarian*, Dr. C. P. Graham, of Middletown. *Executive Committee*, Drs. Mallet, Metcalf, and Stevens, of New Haven.

POISONED BY TOBACCO JUICE.—A young man, named Richard Edmondson, a cotton piecer at Messrs. Garnett and Horsfall's, Low Moor, near Clitheroe, died last week somewhat suddenly, with all the symptoms of having been poisoned. His pulse was quick and feeble, his eyes dilated and insensible to light ; the heart was perfectly paralyzed, his muscles rigid, and he was unable to swallow. This was his condition before death. The coroner ordered a *post-mortem* examination of the body to be made by Dr. Scott, of Clitheroe. He found the vessels of the brain swollen and filled with black blood, together with extravasation of blood in the ventricles of the brain. "These appearances," he deposed, "led me to conclude that the deceased had taken some narcotic poison, as we find them in persons having taken opium. I attribute the appearance of the blood vessels on the brain to narcotic poison. The deceased was very much emaciated. After hearing all the evidence I attribute the cause of his death to the chewing of Limerick roll tobacco and his having swallowed the juice. It is a kind of poison that acts on the brain, and is an irritant and compound poison. It is not used in medicine now. I should not like to give a person 30 grains of the unprepared tobacco. Tobacco gains power according to the way in which it is manufactured, and the Limerick roll is exceedingly strong tobacco." The coroner summed up, and the jury returned a verdict "That the deceased died from the effect of having chewed Limerick roll tobacco and swallowing the juice thereof, which has acted upon the stomach as a narcotic poison." —*The Chemist and Druggist.*

STATISTICAL TABLES OF SCARLET FEVER. By R. LEE, B.A. Surgeon.—These tables are founded on 309 cases of scarlet fever under the care of the author. They were first suggested by a wish to ascertain whether in scarlet fever the occurrence or the intensity of ordinary sequelæ bears any relation to the development of the eruption; and it is thought that they may form a basis for the tabulation of a large number of cases to that end.

The tables show the age and sex of the patients, the date of appearance and disappearance and the degree of the eruption, the date of appearance and disappearance and the degree of glandular swellings and anasarca, and the occurrence of other complications. They also indicate the degree of success which the author experienced during a single epidemic by the free administration of quinine from the earliest stages. Of the total 309 cases, 13 (4·2 per cent.) died. Of the 309 cases, 31 were treated with salines, of which 10 were fatal; and 2 with salines and quinine, of which 1 was fatal. One case was fatal from convulsions, in which neither treatment was pursued. The remaining 175 cases were treated with quinine; and of this class only 1 case was fatal, death being due to diphtheria.

These results are worthy of attention; and the author deserves great credit for the care with which he has tabulated his cases. At the same time it is to be noted that most of the deaths, including that in which quinine was employed, occur in the early part of the tables. The great success of the quinine treatment, as indicated by the latter part of the tables, was probably due, in a great measure, to the mildness of the epidemic in which it was employed.—*London Lancet.*

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 10th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	47	42	89
Ave. mortality of corresponding weeks for ten years, 1853—1863,	37.4	37.0	74.4
Average corrected to increased population - - - - -	00	00	81.50
Death of persons above 90 - - - - - - - - -	0	0	0

BOOKS RECEIVED.—A Practical Treatise on Pulmonary Consumption. By Horace Green, M.D., LL.D. New York: John Wiley.—A Manual for Medical Officers of the United States Army. By Charles R. Greenleaf, M.D., Assistant Surgeon U.S.A. Philadelphia: J. B. Lippincott & Co.—The Hygienic Cook Book; containing Recipes for making Bread, Pies, &c. By Mrs. Mattie M. Jones. New York: Miller & Browning.

MARRIED,—In Ipswich, 21st ult., Dr. A. B. Hall, of Boston, to Mary P., eldest daughter of Rev. John P. Cowles, of I.—At Mason, N. H., 20th ult., E. J. Donnell, M.D., to Miss Nellie F. Presscott, both of M.

DIED,—At Medford, 5th inst., Daniel Swan, M.D., in the 84th year of his age.—At Beaufort, N. C., Oct. 17th, of yellow fever, R. A. Babbitt, Surgeon 1st North Carolina Union Volunteers, in the 23d year of his age. Dr. B. was formerly of West Randolph, Vt.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 10th, 89. Males, 47—Females, 42.—Accident, 2—aneurism of the aorta, 1—apoplexy, 1—congestion of the brain, 1—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 4—burns, 1—cholera infantum, 1—cholera morbus, 1—consumption, 24—convulsions, 3—croup, 2—debility, 1—diarrhœa, 1—diphtheria, 1—dropsy, 2—dropsy of the brain, 3—drowned, 2—erysipelas, 1—typhoid fever, 2—typhus fever, 1—disease of the heart, 3—insanity, 1—intemperance, 2—congestion of the lungs, 1—inflammation of the lungs, 5—marasmus, 3—old age, 2—peritonitis, 2—premature birth, 1—puerperal disease, 1—rheumatism, 1—scalded, 1—smallpox, 3—ovarian tumor, 1—unknown, 5.

Under 5 years of age, 32—between 5 and 20 years, 7—between 20 and 40 years, 22—between 40 and 60 years, 18—above 60 years, 10. Born in the United States, 64—Ireland, 21—other places, 4.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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LATENT ENCEPHALOID DISEASE OF THE STOMACH, OF A VERY PECULIAR FORM, IN A LAD 15 YEARS OF AGE; THE FIRST OF HIS SICKNESS DATING FROM A FALL THAT HE RECEIVED ONLY TEN MONTHS BEFORE HIS DEATH.

[Read before the Boston Society for Medical Improvement, Dec. 12th, 1864.]

By J. B. S. Jackson, M.D.

On the 17th ult., I received from Dr. J. M. Nye, of Lynn, who made the dissection, the stomach, with a tumor external to it, and a portion of the liver; and the stomach, with a cast in plaster of the same, is now before the Society for examination. The disease of this organ is not continuous, but in separate patches, circular or irregularly oval, about ½ inch to rather more than 2 inches in diameter; altogether there may be about a dozen of them, but those that I suppose to be the most recent seemed to be indicated by little else than opacity of the mucous membrane, though their outline is sufficiently well defined, as is that of the patches generally. The larger patches, of which there are four or five, are raised from two to three lines above the surrounding surface, soft in appearance and to the feel, and of a dull yellowish opaque color, with some small dark-red ecchymoses over the surface of two or three. The whole surface of one of these last is deeply ulcerated, but without any induration about it; and there may be a trace of the same in one of the others. Otherwise the stomach is perfectly healthy; there being no disease within some distance of the orifices, and this last fact explains the absence of those symptoms that are usually associated with cancer of the stomach. A comparative latency of the disease is not unfrequently noticed in cases of common encephaloid as distinguished from scirrhus of the organ; this last affecting particularly the pyloric portion and involving more or less the pylorus, whereas the encephaloid is found generally in a large, single, defined circular patch in the small curvature, and not far from midway between the two orifices; the rest of the stomach being sometimes perfectly healthy, and the latency complete.

The tumor referred to was closely connected with the stomach and duodenum, was nearly as large as the fist, and in structure as marked an encephaloid as I have ever seen; being of the soft variety, with some traces of effused blood. The disease of the stomach, I have taken it for granted, was of the same nature, though the patches were not cut through; and my idea is that it preceded the formation of the disease external to the organ, though this last was so very extensive.

The portion of liver that I saw was quite healthy, and so Dr. N. found the whole organ, though it was considerably enlarged; the bile in the gall-bladder being thick and dark. The other organs he found healthy, and quite free from cancerous disease.

A few days after I received the specimens, I had an opportunity, through the kindness of Dr. Nye, of seeing Dr. A. D. Dearborn, of Saugus, the family physician, and also the parents of the lad. The father, the Rev. W. P. Upham, had been a missionary amongst the Cherokee Indians for the last twenty-two years, and his children were all born in the West. The subject of the present case was rather smaller than the rest, but always very active in mind and body. For about a year, previously to the last two years, he had had occasional but not well-marked attacks of intermittent fever; the other children being much more severely affected than he was. Last July the family moved from the West, and have since resided in this vicinity. The parents and their other children are quite healthy, and they are not aware of there ever having been a case of cancer upon either side of the family.

On the 7th of September, as nearly as Mr. and Mrs. U. can remember, their son jumped from the back of a wagon, when it was going at the rate of about six miles an hour, and fell with considerable force "upon his face," i. e. upon the front of his body. He was able to walk home, however—about three fourths of a mile—but from that time he complained of an occasional and paroxysmal pain in the epigastrium, and, when he exerted himself, it would be quite severe. Up to the time of this accident the parents insist upon the fact that he was perfectly well; though for a year and a half or two years previously he had ceased to grow. This last fact would hardly be explained by the attacks of fever that he had had in the West; and I cannot think, from the entire absence of symptoms, that the cancer had been forming all that time, however latent the disease sometimes is.

About four weeks after this accident, he was sent upon an errand about a mile from home; and, a buggy coming along, he took hold behind it, and, as the horse was going very fast, it was as much as he could do to keep up with it; and yet he was afraid to let go, lest he should fall. When he arrived, however, at the place where he was to stop, he was obliged to let go his hold, and he again fell, with great violence, "upon his face." It was with great difficulty that he walked home; immediately upon his arrival he threw himself upon the sofa, very much exhausted, and complaining of great distress at the epigastrium. He recovered, however, from this second accident so far as to be able to go to school for two weeks longer. At the end of this time he went to Boston with his father, and passed the day in seeing the sights of the city; going up into the cupola of the State House, and walking altogether, Mr. U. thinks, about six miles. As usual on such occasions, he took no proper dinner, but ate pie three or four times in the course of the day.

On the day following this excursion, and about four weeks before his death, which occurred on the 16th of November, he dined, though without appetite, upon roast lamb, and immediately afterwards vomited. From that time he was sick, and his case was regarded as one of typhoid fever. For the first week his mother took care of him, but afterwards he was attended by Dr. Dearborn. The chief symptoms were a moderate increase of heat, but without chill; restlessness, wakefulness, not merely anorexia, but almost a disgust at the idea of food, and of which he took scarcely any, vomiting twice at the end of the first week and again once three days before death; yellowness of the skin, which during the last week was quite marked, and was fully explained when the bile ducts were found so imbedded in the tumor; pain, marked stupor with some delirium for about three or four days previously to the last two, and loss of flesh and strength. No epistaxis. Early in his sickness he complained much of pain in the small of the back, left hypochondrium, and particularly in the left upper extremity; this last being acute, and, as he thought, keeping him awake. These pains, however, afterwards subsided, excepting that in his back, which continued as long as he was conscious enough to complain of it. The vomiting at the end of the first week came on after he had taken peppermint water for a distress in his stomach, and for which no cause could be assigned; there was no nausea nor retching, except when he vomited. As to the matters vomited, they were colored by bile on the last occasion, but on the two first they were not observed. The bowels were never loose, and when they were at all confined they were very easily acted upon by medicine. Soon after Dr. D. saw him, he found an entire absence of bile in the dejections, but after a dose of calomel, and a few blue pills, which were continued for some days, the color was sufficiently well. As organic disease was not thought of, no particular examination of the epigastrium was made, and the tumor was not felt.

On dissection, the disease about the stomach was of course regarded as a sufficient cause of death, and no examination was made of the intestines with reference to the typhoid fever that was supposed to have existed. This is to be regretted, as, according to Mr. Paget (Surg. Pathology, p. 553), Rokitansky has found "medullary cancers sometimes developed in great numbers in the course and among the phenomena of a very acute typhoid fever." I doubt extremely, however, if any affection of Peyer's patches would have been found in this case.

I have spoken of this as a latent case of cancer; for though there were symptoms pointing to the stomach, they were not such as would have led any one to have suspected serious disease. It was latent, though not completely so.

As to the duration of the disease, the lad did not seem to have been in any way sick until ten weeks before his death, when he met with his first fall; and though that would be an exceedingly short period for the formation of such an amount of disease as was found, I believe that it did not exist previously, whatever amount of tendency there may have been in the system to it. Of the two most rapidly fatal cases of encephaloid disease that I have met with, so far as I can remember, one terminated, according to my notes, in four and a half months. The other was that of a gentleman of this city, who, whilst fording a river in the Island of Cuba, during the month of March, met with an accident that obliged him to get out of his carriage and stand up to his waist in water for about an hour; from that time he sickened, and on the 2d of July he died. In both of these cases very extensive disease was found in the abdomen and thorax. Lebert, however, in his work on Cancer, refers to a case of cancer of the womb that he had seen, and which proved fatal in two months; and he remarks that a duration of from three to six months is more frequent than one of eight or ten years. Mr. Paget found that in 45 cases 6 proved fatal within six months; and it may be further remarked that as cancer, after it is known to exist, is sometimes seen to grow with surprising rapidity, we may conceive that in some cases it may do so from the very commencement.

The public, and careless medical observers, who are not much better, are very much inclined to trace back disease to some exciting cause. Cancer is often attributed to an external injury; and with so little reason, probably, in most cases, that some are almost disposed to question whether it is ever produced in this way. That blows upon the breast, the testicle, and the extremities, sometimes induce cancer, I have no question. The first case above referred to, for instance, and which proved fatal in four and half months, was that of a sailor, who fell and struck his testicle; though he suffered but little at the time, pain and swelling came on in two weeks, and from that time he sank. And, in another case, a gentleman was kicked upon the testicle by a child in bed; the organ swelled from that time, but it was not until three years afterwards that it was removed. I was present at the operation, a most cruel and unwarrantable one, as carcinomatous tumors could be felt at the time within the abdomen, and, the patient dying only three days afterwards, I found an immense amount of internal disease. That cancer should be produced by direct external violence, does not seem to me a very unreasonable idea, however the fact may have been questioned; but that it should occur in an internal organ, as the result in any way of a fall, and by which no one organ, so far as we can see, could be directly injured, however severe the shock might be to the whole system, is certainly very remarkable. The operation of the causes of disease, however, is a most mysterious subject; and cases will now and then be met, in which it seems to me much more unphilosophical to shut our eyes to the facts than to allow a connection that we cannot explain. I have referred to the case of a gentleman who stood up to his waist in water for an hour, sickened from that time, and died of extensive cancerous disease; how such an exposure could have produced internal cancer we certainly cannot understand; and yet, if he had not been so exposed, he might perhaps have lived for years. Neither in the case of Mr. Upham's son can we explain the occurrence of cancer of the stomach by the fall or falls; and yet, if they had not occurred, I suppose that he might have been alive at this day.

The occurrence of cancer of the stomach at the age of 15 years, and the peculiar anatomical form of the disease in the above case, are facts that require no comment; and, I would only say further, that, as a whole, it presents as many interesting points as any case of cancer that I have ever examined.

CASES OF TUMORS.

By Richard M. Hodges, M.D.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

Nineteen tumors and outgrowths were removed from patients entering the Surgical Wards of the west Wing of the Massachusetts General Hospital between July 1st and October 31st, 1864. Their nature and locality were as follows:—

1 Glandular—neck.
2 " thyroid body.
1 " testicle.
1 Fatty—shoulder.
1 Exostosis—forehead
1 Erectile—orbit.
1 Malignant—superior maxillary bone.
2 malignant—face.
1 " sub-maxillary.
3 " breast.
1 " (melanotic)—groin and perinæum.
1 Encysted—orbit.
1 " breast.
1 Horn—lower lip.

The following cases, of which the specimens were shown at meetings of the Improvement Society, are reported in detail, as possessing special interest. Others are already reported in the Extracts from the Records of the Boston Society for Medical Improvement.

Ivory Exostosis of the Frontal Region.

S. C., farmer, æt. 24, born in New Hampshire, entered Mass. Gen. Hospital, Oct. 16th, 1864. Has always enjoyed uninterrupted good health, and has no hereditary taint, rheumatic tendency or acquired disease. He enters the Hospital for a tumor of the frontal region of three years growth, attributed to a fall on the ice, happening just previous to its appearance, in which he struck his forehead. This tumor occupies rather more than one half of the forehead on the left side, extending from just beyond the median line to the temple, and from the roots of the hair downward, projecting into the orbit, protruding the eye and displacing it downward and outward, over three inches from the inner orbital angle. At its most prominent point, the tumor is two and a quarter inches above the natural surface of the frontal bone; from side to side it measures five inches; from above downward, five and a half inches. The integument over this growth is natural in appearance, and not tense or adherent. It is uniformly smooth, and not lobulated, although there is an imperfectly marked division into what might be called a frontal and an orbital portion. It is immovable, not sensitive to the touch. At one or two points it has an elastic feel, and gives the sensation of a thin bony cyst; elsewhere it appears perfectly dense and bony. At times the tumor is the seat of a great deal of pain. The sight of the eye is impaired, and attempts to raise the eyelid cause severe pain in the eyeball. There are not now, and never have been, any cerebral symptoms. The pulse, bowels and appetite are natural. Patient is a little slow of speech; acquaintance shows him to be querulous, complaining and timid.

According to the man's own statement, the tumor has presented a bony feel from the outset, although at the end of a year after its first inception, a fluctuating spot towards its inner border developed itself, was punctured, and discharged a quantity of sanious, watery fluid, mingled with purulent matter. At this period, and subsequently, the tumor was exceedingly painful. Some months after the first puncture, it again became soft and fluctuating at the same spot, and was again punctured, with a similar result. At this time patient had a severe attack of typhoid fever. This last occurrence was in July, 1863, and since then the tumor has increased in size with great rapidity.

Oct. 19th.—On consultation with the surgeons of the Hospital, an attempt to remove the tumor was advised.

The tumor was exposed by a curved incision, with its concavity downward. This revealed a thin shell of bone, deficient at various points, expanded over the diseased growth, which itself proved to be an ivory exostosis. Between the thin shell (which was easily removed) and the tumor, was a quantity of gelatinous material, of the consistence of toasted cheese, of a greenish purulent color. Two slices of the exostosis were removed by an amputating saw, and then, with the mallet and chisel, the remaining portion was cut down to a level with the frontal bone, and by the same means gouged out from the orbit, so that the eye could be restored to its natural position. Of four chisels used, the edge of but one could stand the dense ivory structure. There was not the slightest sign of vascularity in any part of the growth. The flaps being brought together by sutures, a wet compress was applied and the patient was carried to the ward. In the afternoon he was "doing well." From the outset he was allowed broth, and bread and milk for diet, and after the operation he went on so well that on the 24th the record was as follows: "Several sutures removed. Considerable discharge from the outer end of the wound. Swelling so much subsided about the lids that he can part them and obtain tolerable vision. Appetite good." And on the 25th, "less œdema about lids. Sat up one hour." 29th.—"Sat up for some time to-day; is constantly improving. Eats beefsteak, vegetables and fruit, with great relish." This progressive improvement continued until Nov. 11th, when an œdema of the integument of the forehead appeared and began to extend. His physical state, even at this time, was reported to be good, but on the 13th he complained of severe pain in the back of his head and neck; this was relieved by a cathartic and local applications, and on the 16th he was considered to be again doing well. At this time he was sitting up two hours daily, but on the 20th it was reported that he "sits up only when his bed is making in the morning," and that there was very severe pain in the back of the head and neck.

21st.—"Delirious in the P.M., and increasingly so in the evening. Refuses nutriment."

22d.—It was apparent that he was failing.

23d.—"Much worse towards evening, appearing almost comatose, with stertorous breathing."

24th.—"Died quietly, about 3, A.M."

The gelatinous material found between the shell of bone and the exostosis proved to be degenerated pus. The microscope showed large granular pus and blood corpuscles, and an abundance of free fat globules.

On examination after death, the exostosis was found to project internally, as it had externally, compressing the anterior lobe of the left cerebral hemisphere, which was the seat of an abscess occupying the whole of the hemisphere anterior to the middle lobe. The inflammation had extended to the right hemisphere at one point, where in contact with the left, and for the space of a square inch was sloughy and purulent. There was no meningeal inflammation, except in the fissure between the two hemispheres anteriorly, and, to a very limited extent, over the pons Varolii.

The tumor itself presented similar characteristics internally to those which were noticed externally at the time of the operation. There was a similar bony shell, deficient at points, but none of the gelatiniform, purulent-like substance between it and the surface of the tumor. It was found here, which it was impossible to do externally, that the exostosis was invested with a membrane, stripped or even wiped off with great ease, more nearly resembling a mucous one than the ordinary periosteum of bones. The general appearance and color of the exostosis conveyed the idea that since the operation it had undergone necrosis, though in a structure so devoid of vessels this point was not an easy one to determine. It was movable and loose in the frame work of the frontal bone, whereas when operated upon it was perfectly fixed and firm. Its structure was uniformly dense throughout, and nowhere lamellated, or presenting concentric layers.

On removing the entire exostosis, with the bones connected with it, the disease was found to have invaded the nasal cavities, and to have filled the whole posterior part of the orbit, in a series of small lobules connected with the main tumor. and forming a portion of it; there were no isolated formations. In its growth it had nowhere separated or distorted the bones with which it was involved. It would seem to have had its origin in the frontal sinus, or diploic tissue of the left side of the frontal bone, and the bony shell which partly invested its internal and external surfaces was probably the expanded inner and outer tables of the os frontis. The gelatiniform substance found in relation with its outer portion may have been the degenerated diploe. The gross appearances of this material were very remarkable and altogether exceptional.

The operation performed in this instance has been successfully performed once previously. Chelius (*Ophthalmologie*, p. 428) reports the history of a young man, the subject of an exostosis which filled five sixths of the orbit, pushing the eye outward and upward, so that it was, as it were, set in the mass. A German surgeon, named Schott, attacked this with the chisel and mallet, and a new orbital cavity was hollowed out of its centre. Sight was restored, and the cure was complete and lasting. (Demarquay. *Traité des Tumeurs de l'Orbite*, pp. 51 and 67.)

Measures intended to result in causing the necrosis of such tumors have been, on several occasions, adopted, and to this end the saw as well as caustics have been resorted to. This practice and the difficulties with which it may be attended are illustrated by the following case related in Holmes (*System of Surgery*, vol. iii., p. 691):—"A man suffering from a small ivory exostosis of the frontal region, fell under the care of Mr. Keate, one of the boldest and most skilful operators of his day, who perseveringly but vainly endeavored, by the use of trephine, saw, chisel and mallet during the space of nearly two hours to cut off the little lump of hard bone. The patient was fortunate enough to recover from this proceeding, and Mr. Keate, convinced of the uselessness of further operation, determined to attempt the extirpation of the tumor by the free application of potassa fusa and nitric acid to its exposed base. This was successful. The caustics in the course of years eat their way through the base of the tumor, which dropped off. The tumor still shows the deep groove worked into it by the trephine at the time of the operation."

Other cases, in which, by the application of caustic, exostoses have sloughed out and separated from the surrounding bones, and one in which, loosened by an attempted cutting operation, the exostosis was extracted in a carious condition from the orbit, twelve months afterward, are to be found in Mackenzie on Diseases of the Eye. If the patient, the details of whose case have been reported, had lived, the termination of the last-mentioned instance would probably have been repeated.

Although the authors of the *Comp. de Chir.* (vol. iii., p. 415), refer to the successful case of Schott as "one of those fortunate strokes of rashness, favorable so far as the individual instance goes, but hereafter to be compensated for by numerous unfortunate failures which a practice less audacious would have avoided," the extent to which the disease, in the case under consideration, had progressed, and the horrible future which its increasing growth threatened, justified an attempt to arrest by operation its further development. The locality and limited character of the exostosis made it a favorable one for removal; an unsightly tumor would be disposed of, the deformity of the eye would be relieved, and the destruction of its sight prevented. The excellent condition of the patient for so long a time after the operation conveys the impression that the operative measures were not of themselves the cause of the abscess of the brain, but that this was due to the pressure of the tumor, and to the irritation resulting from its necrosed condition, which gave to it the character of a foreign body.

Erectile Tumor of Orbit.

M. T., æt. 58, real estate agent, born in New Hampshire, entered Mass. Gen. Hospital, July 9th, 1864. In the winter of 1840–41, the patient severely froze the right side of his face. This was followed by a dryness and uneasiness in his right eye, which lasted until the following April, when, whilst reading by gas-light, he was suddenly seized with a sharp pain and watering of the eye. For this he was treated by a distinguished oculist, from whom I learn that there ensued an attack of specific iritis. Traces of this still remain in the pupil, which is partly blocked up by lymph, and the sight is impaired in consequence. At the expiration of six weeks a cure was effected, but the patient noticed at the end of the treatment that there was a slight eversion of the eyeball. Six years later (1847), a small tumor became apparent below the eye, varying in size at different times. In 1850, the tumor having increased, a second oculist was consulted, by whom he was treated for eight weeks, chiefly by bleeding and submuriate of mercury. The existing inflammation of his eye subsided, but the treatment was without result so far as the tumor was concerned. In 1854, the tumor having still further increased in volume, he was again subjected to the treatment above alluded to. The irritation of his eye, which he attributed to the size of the tumor, diminished, but the tumor remained unaffected.

In 1860, the size of the tumor was such that it protruded the eyeball and caused eversion of the lower lid. As the result of a consultation of oculists, a treatment of conium and iodide of potassa was pursued for six months. During this period the tumor was punctured with a lancet, giving issue only to blood. For about three years the patient has been under no treatment, and the disease has been slowly but steadily increasing. The exophthalmia has now reached a remarkable degree, and the aspect of the patient is extraordinary and hideous. The tumor is apparently somewhat larger than a hen's egg, protruding the eye forward with slight eversion. The upper lid is very much distended and stretched. The conjunctiva is thickened, ulcerated, and suppurating over the everted lower lid. The tumor is elastic, movable to a limited extent, rounded and without lobules. There is no pulsation or sensation in it at any time; as the patient says, it feels perfectly "dead." Since the first attack, in 1841, the vision of the affected eye has not altered. General health robust and unimpaired.

July 10th.—Operation. An incision was carried from the outer canthus to the edge of the orbit. The conjunctiva being cut across, displayed the external rectus expanded over the tumor. On dividing this, the enucleation of the tumor was effected with comparative ease. No vessel required a ligature, nor was there any venous hæmorrhage or oozing of any kind. The distended orbit and the cavity left by the removal of the disease permitting the eyeball to fall back to an unnatural degree, it was held in proper relation to the eyelids by a stitch carried through the conjunctiva.

The tumor, as large as an egg, is smooth and ovoidal in shape, and on section consists of a cavernous structure, filled with blood, easily evacuated by pressure and washing, by which processes it is reduced in size one half, and is then seen to consist exclusively of cells, analogous to those of the corpus cavernosum penis, and capable of inflation with a blow-pipe, so as to resemble the section of an emphysematous lung. Under the microscope there are no signs of any vessels, or of any other structure than a cavernous one. The tumor is enclosed in a tough capsule, into which no vessel can be seen entering.

July 16th.—Patient walks out in the garden.

Aug. 8th.—The overstretched lids have gradually contracted. Has motion of the eye, almost equal to the unaffected one. The sight is better than for seven or eight years past.

Aug. 12th.—Discharged, well.

When seen, a month later, there was little difference between the two eyes; all the apparently superabundant tissue of the lids had shrunk to their natural proportions, and there was no appreciable deformity of the eye or its appendages.

The remarkable feature of this tumor consists in its perfectly encysted character, and the absence of vascular connection, either venous or arterial, of appreciable size, with the surrounding parts.

Erectile growths sometimes undergo a spontaneous cure, becoming simple fibrous tumors without special afferent or efferent vessels, and an interesting specimen of this was shown to this Society, a few evenings since, by Dr. H. J. Bigelow. In that instance, everything of a vascular character had disappeared, and the tumor had become but a congeries of cavernous cells, filled with limpid fluid. In the operation for its removal, no vessel required a ligature. But in the tumor under consideration its active vascular character still remained. So far as I can learn, the only author who makes mention of tumors of this description is Von Carion, *Lehrbuch der praktischen Augenheilkunde,* Vienna, 1861, page 506. "Vascular spongy growths (cavernous growths) are sometimes developed in the deeper layers of the sub-cutaneous cellular tissue of the lids and their immediate neighborhood, and occasionally also extend their roots into the orbital tissues, and indeed to variable depths. They are always surrounded with a thin areolar capsule, and consequently can be enucleated." For this reference I am indebted to Dr. G. Hay.

A cavernous tumor in many respects similar to the one above described was removed by Liston from the popliteal space. The case is reported in the *Med.-Chir. Transactions,* vol. xxvi., p. 120.

AN EPIDEMIC OF ACAPULCO FEVER.

By Geo. T. Shipley, M.D.. U.S.N., Surgeon of U. S. S. Wateree.

[Communicated for the Boston Medical and Surgical Journal.]

At anchor in Magdalena Bay, Lower California, in latitude 24° N., on the 8th day of October, 1864, one landsman of the Wateree was attacked with remittent fever. On the 9th, at sea, going North, two more cases occurred; on the 10th, three; on the 11th, twenty-two; on the 12th, thirty-one; on the 13th, eleven; on the 14th, eighteen; on the 15th, twelve; on the 16th, eight; on the 17th, at anchor off Vallejo Navy Yard, California, five; on the 18th, seven; and the disease ceased. On the 21st I had a slight attack myself; fortunately after reaching a point where other medical aid for the men was available. When attacked, I was residing at a house in the Yard.

Convalescence supervened in every case, in from two days to thirty or more. But thirty-two cases remain upon the list to-day, Nov. 7th, all of whom are progressing favorably. I classify my patients as follows:—

Officers,	2	Seamen,	12	Marines,	5	Coalheavers,	8
" forward & petty,	19	Landsmen,	63	Firemen,	12	Total,	121

One hundred and twenty-one cases in a total ship's company of one hundred and ninety-six, within a fortnight.

The disease began in every case with a chill of greater or less intensity. In eleven, a second and quotidian chill followed. The usual febrile exacerbations were noticeable in every case, occurring towards evening. The disease bore every evidence of being the ordinary remittent fever of the coast, but in thirty-one instances was complicated with symptoms of yellow fever, to such an extent that an observer unacquainted with the history of the affair would have pronounced these thirty-one patients suffering from genuine typhus icterodes, in a mild form. Even to the somewhat undetermined statement of the initiatory chill of remittent occurring by day, and that of yellow fever by night, these thirty-one cases bore favorable testimony. Their origin was for the greater part between sunset and sunrise. With them the extreme epigastric tenderness upon pressure, the nausea, the intense pain in head and back, the desire for cold drinks, the anxiety of countenance, in one case the suppression of urine for eighteen hours, in several—one strongly marked—the hæmorrhagic diathesis, with tubercles studding the skin and *leaking* blood, the suffused and darkened upper face, the peculiar discoloration of skin and eyes, the deceitful calm between the first and second febrile attacks, the singular fondness for tobacco when nothing could be retained by the stomach—were all so marked that neither Dr. Bishop, the surgeon of the yard here, nor I, had any hesitation in regarding the disease, in these cases, as remittent and yellow fever combined, if not pure typhus icterodes; though without black vomit.

Typhoidal symptoms, extreme debility with occasional delirium, supervened in many instances, both in the remittent and yellow fever. The disease or diseases gave all grades, from the walking cases with spontaneous recovery, to the patient brought to death's door, and rallying only after fierce battle with the pestilence. Already, as I write, nine men who had remittent fever only, have had relapses of intermittent, since entire recovery from the former.

The treatment may be briefly stated. A cathartic at the outset, of Ext. colocynth. co., with an equal quantity of pil. hydrarg., or of hydrarg. chlor. mit., with an equal quantity of quiniæ sulph., or of rheum et magnesia. Following this cathartic, quiniæ sulph., and whiskey. Beef-tea, soups, &c., when required. Sinapisms epigastrically, creasote, chloroform, &c., internally, for the extreme nausea; hyoscyam. ext. and opium for insomnia; cold water as a drink *ad libitum*. Bleeding in any form was *never* resorted to. I believe it was never required. I have used whiskey lavishly, both in the disease and during convalescence. I have no hesitation in saying that to its unstinted use, with the inevitable quinine in combination, the convalescence of the hundred and twenty-one patients is due. Due, I mean, in the aid that the stimulant and the anti-periodic gave to the great healer of all disease, Nature. That without the stimulant many patients would have died, I have no doubt. The ship will be thoroughly disinfected by superheated steam.

From Sept. 26th to Oct. 1st., the ship was at anchor in Acapulco harbor; an utterly land locked bay, shut in by high mountains, at the foot of which are swamps receiving their drainage. Thermometer 85° to 100°. Little wind, and that from the swamps to the ship. All sorts of malarious fever raging on shore and in the French squadron there. The French fleet-surgeon had just killed himself by trying to ward off a chill with 240 grains of quinine in a dose. No traces of yellow fever on shore or in the ships. Its existence a fortnight later in the Wateree, seems to me a clear and unmistakable result of the remittent. The Wateree had traversed the Atlantic and Pacific tropics to Acapulco, in her cruise, touching and remaining for weeks at prominent ports, without a single case of epidemic or climatic disease till she left Acapulco. Can remittent develope yellow fever? The question has points of interest to physicians afloat and ashore.

Vallejo Navy Yard, Cal., Nov. 7th, 1864.

NOTES.—Magdalena Bay is a locality where dampness on shore is unknown. No rain has fallen there for *eight years*.

The Wateree is a sweet and clean iron ship, free from bilge water, 1000 tons burden, with side wheels. Her only characteristics of *adjuvant disease* are in giving a typhoid and rheumatic tendency to every sickness occurring on board, like all other iron ships.

ON THE ACTION OF THE BROMIDE OF POTASSIUM.

By S. W. D. WILLIAMS, M.D., L.R.C.P. LOND., &c.

READING some remarks in a late number of the *Lancet* on the action of bromide of potassium, and having tried the drug extensively for the last five months, it has occurred to me that a few observations on its action may not be unacceptable to the readers of the *Medical Times and Gazette*.

Through the kindness of Dr. Wing, the Superintendent of the Northampton General Lunatic Asylum, I have been enabled freely to try it in as many as thirty-seven cases. These were all epileptics, and I append a table showing in one column the number of fits registered during the last five months of last year, when they were taking no medicine, and in the other the number registered during the first five months of this year, when each case was taking on an average ten grains of the salt twice daily.

I may premise that the greatest care was taken that, for the whole of the ten months during which these thirty-seven patients were under observation, their lives, with the exception of taking the bromide during the last five, should be spent under as near as possible the same circumstances.

From the following table it will be seen that the number of fits amongst the males decreased by 306, and amongst the females by 157; that all the patients but 5 males and 6 females were benefited more or less; that the improvement was, however, more apparent amongst the males than the females; but that no patient of either sex was entirely cured. It is right to remark that all these patients are more or less insane, and many of them extremely violent at times.

Males' Names.	Fits during last five months of 1863.	Fits during first five months of 1864.	Females' Names.	Fits during last five months of 1863.	Fits during first five months of 1864.
W. M.	148	107	E. H.	23	19
J. R.	69	45	E. J.	25	37
J. B.	32	21	M. K.	60	27
J. J.	246	91	E. H.	29	9
W. L.	55	37	E. W.	50	56
S. L. B.	19	24	C. S.	17	23
T. H.	40	29	S. A.	82	85
C. B.	52	46	M. L.	20	5
R. H.	112	102	A. S.	41	22
G. M.	47	64	E. G.	46	53
W. W.	36	37	H. W.	1	..
J. L. M.	33	26	M. L.	57	8
T. G.	13	4	A. C.	11	22
R. G.	30	9	M. C.	1	..
J. K.	25	16	S. A. P.	577	556
E. E.	8	14	S. A.	1	..
W. O.	10	10	S. S.	73	37
W. M.	29	14	E. G.	13	11
J. J.	8	10	..	..	..
	1012	706	..	1127	970

Mr. Henry Behrend. the writer in the *Lancet*, confines his remarks to the powerful effect this drug has on "insomnia and restlessness, accompanied and dependent on nervous excitement and irritability," and this statement my own observations fully corroborate; but I have not the same confidence in recommending, as he does, the unfettered use of half-drachm doses; for in several of the cases recorded above it was found necessary to reduce even the average—ten grains twice daily; and in the majority the first use of the drug was accompanied by sickness and lassitude.

Those patients on whom the drug seemed to take the most effect in this way were seven in number; after using it for a few days the action of their hearts became slow and fluttering, the eye lost its lustre, the skin was cold and clammy; they had a wearied, anxious look, and complained of headache, and sickness, and shivering, and of unusual weakness at the knees, and invariably sat crouched up by the fireside all day, evidently devoid of all energy and resolution. Curiously enough, in all the cases thus powerfully affected the fits were increased instead of diminished.

The drug excited hypercatharsis in two patients, which was repeated again and again each time it was renewed; the fits in both these cases were diminished; in the case of the female from 41 to 22.

One patient, S. A., was apparently, five months ago, one of the most healthy persons in the home—fat, strong, and rosy; but soon after taking the bromide, the peculiar symptoms described above developed themselves, and the medicine was immediately omitted; but, although she rallied a little, her system never thoroughly recovered itself; tubercles became developed in the lungs, and she died towards the end of April. Truth compels me to confess that I have my doubts whether the bromide of potassium had not something to do with this poor girl's death—at all events, this occurrence has made me very watchful when using it.

On the other hand, considerable benefit has arisen from its use in some cases; it undoubtedly exercises a most powerful influence on the nervous system, and often soothes the irritability of epilepsy, even if it does not diminish the frequency of the fits, when no other medicine will take any effect, and in this way will be found a most valuable adjunct to the repertory of an asylum Dispensary. I cannot think that it has much effect, however, on the sexual system; for in some cases where it was used more especially with that view, there was no apparent result, but of its powers in inducing sleep in cases dependent on nervous irritability there can be no doubt, and often from ten to twenty grains twice daily will suffice to effect this. —*Medical Times and Gaz.*

Bibliographical Notices.

Outlines of Surgical Diagnosis. By George H. B. Macleod, M.D., F.R.C.S.E., &c. First American Edition, re-printed from advance sheets. New York. 1864. 8vo. Pp. 505.

This re-print of the work of Dr. Macleod, we think, will be a valuable addition to our medical literature. As its name imports, it is devoted simply to the diagnosis of surgical diseases. The importance of an accurate surgical diagnosis none can dispute. Less care may be requisite, perhaps, in a large number of cases than in medical diagnosis, yet on many occasions a long and attentive investigation and a careful balancing of facts may be necessary in order to learn the truth. Certain it is that some grave diseases, insidious in the commencement, so far simulate less serious lesions as often to mislead the most accurate observers. The points of similarity and those of difference are well pointed out in the book under notice. The author does not intend to make the work one of systematic surgery; it contains, therefore, no allusion to pathology or treatment, these being left to more general works on the subject. The body of the book is occupied with the separate consideration, in alphabetical order, of the diagnostic marks of the various surgical diseases and conditions; for instance, fifteen pages are devoted to aneurism, five to arthritis, eleven to diseases of bone, &c. Altogether we believe it to be a valuable handbook, and should be glad to see it on the tables of our surgeons.

Physician's Handbook of Practice for 1865. By WILLIAM ELMER, M.D. New York: W. A. Townsend.

THIS physician's companion comes to us in its usual style of convenience and adaptability. We have found it extremely useful in daily practice. Some trifling additions have been made in the present issue, but in the main it is the same as that of last year.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 22, 1864.

APOTHECARIES' ASSISTANTS.—In a report upon the number of deaths caused by poisons in England, recently prepared by Prof. Taylor, of London, it appeared that a large percentage of the same was the result of carelessness in dispensing on the part of apothecaries. So frequent have these accidents become of late, that all sorts of remedies, except the right one, have been proposed there in the form of "poison bills," safety bottles, &c., but until a proper degree of training is enforced by Parliament on the part of apothecaries, and all in their employ who are entrusted with the dispensing of medicines, all other precautions will be in vain. Although we have no absolute data to consult respecting our own country, we fear that a similar investigation here would disclose a condition quite as deplorable. Three times certainly in the past twelve months have we had our prescriptions answered by the return of substances which were not written for, and although these mistakes were not of a dangerous character, they betrayed a carelessness or ignorance on the part of the dispenser which would indicate the possibility of future mistakes not so harmless. Now all, physicians as well as apothecaries, are liable to make mistakes occasionally, but they are only excusable when they concern our judgment. Mistakes in prescribing and dispensing are not of this class, for they must result either from culpable ignorance or carelessness. No physician has a right to prescribe a drug, the dose of which he has to guess at, and if he will observe the precaution which we once heard so forcibly impressed upon a class of students by our poet-physician that none of them will ever forget it, of religiously taking up his prescription after he has written it and reading it over again, he will never be guilty of the latter. Neither has any apothecary a right to employ an assistant who betrays a habit of carelessness or has not acquired a knowledge of dispensing sufficient for the preparation of the most complex recipe; and yet in many well-patronized shops mere boys may be seen thus occupied who cannot have acquired a proper education to fit them for such employment.

We were recently called in the night-time to a person said to be in a fit. We found, on the contrary, a stout man sitting with his leg elevated above his head, and the floor beneath his chair covered with blood. He had, it appeared, a large ulcer upon the lower leg, from which the bandages had not been removed for several days, and the foul ulceration had opened a bloodvessel. We wrote for a scruple of persulphate of iron. After waiting half an hour, during which the hæmorrhage was checked by the application of ice, the messenger returned with a quantity of powdered sulphate of iron. In this instance the ignorance of the person left in attendance was fortunately followed by no ill consequences, but in many cases time thus lost might be a very serious matter.

There are countries where such an occurrence is impossible, where the number of apothecary shops is limited by law, and where there can be no principal or assistant who has not studied a certain time and passed certain examinations; and although we cannot expect our own land to be so thoroughly ruled as this, we certainly can take the law into our own hands, and send our prescriptions where we know they will be properly attended to. The modern system of converting a serious and responsible business into a fancy-goods establishment where numerous salesmen are required, is, we believe, a most dangerous practice, and cannot be too severely commented on. There are, we know, apothecaries among us who have a nobler idea of the art of pharmacy than this, and who do all in their power to prevent a learned profession from degenerating into a mere trade, and these alone should receive the support of our patronage.

American Medical Association.—The Committee of the American Medical Association to which was referred, at its last annual meeting, the subject of "*Spotted Fever, so called,*" earnestly solicits from members of the profession in different parts of the country information respecting the history, phenomena and treatment of this disease as it has come under their own observation. As it is desirable to know the geographical distribution of this disease, intelligence respecting it from physicians residing in distant States and from medical officers of the Army will be particularly acceptable.

For the sake of uniformity the following questions have been prepared. Any facts not included in these questions or suggested by them, will, with the answers themselves, be gratefully appreciated and acknowledged by the Committee. Address the Chairman of the Committee, Dr. James J. Levick, 1109 Arch St., Philadelphia.

I. When did the "Spotted Fever, so called," appear in your neighborhood, and how long did it prevail there?

II. What were the usual symptoms of the disease, and what unusual symptoms occurred in your practice?

III. Did it attack many individuals at the same time, and was it materially modified by the age, sex or temperament of the patient?

IV. What was the ordinary duration of the disease, and were relapses, or second attacks, common?

V. Are you in possession of any proof that the disease was communicated from one person to another?

VI. What appeared to be the predisposing, and what the exciting causes of the disease?

VII. What complications and what sequelæ of this disease came under your notice?

VIII. What other diseases prevailed at or near the time that spotted fever did, and what epidemic diseases followed it?

IX. What was your mode of treating the disease?

X. What was the proportion of deaths to the whole number of persons attacked, and what was the usual manner of fatal termination?

XI. What were the *post-mortem* appearances?

XII. Were any microscopical observations made, and what were their results?

XIII. Has this disease prevailed in your neighborhood in former years?

A Seal Feast among the Esquimaux.—The following extracts from Hall's Arctic Research Expedition, just published, illustrate the habits of the most carnivorous people in existence. Notwithstanding the immense amount of animal fats consumed by them, consumption is rapidly reducing their numbers.

"Our breakfast and dinner were both excellent; for the former, raw frozen walrus, of which I had a piece for my share of about five pounds, and at the latter, seal. The portion of this allotted to me and Sterry was the head. We complied with the Innuit custom. Sterry took a mouthful, then passed it to me, and when I had done the same it was returned to him, and so on. Of course *fingers* were all in all. No knives and forks are found among the Innuits; fingers and teeth are more than their equivalent.

"When the meat, skin and hair were all despatched—even the eyes, except the balls, which were given to the youngest child of Sampson—we "tapped" the brain. I was surprised at the amount of a seal's brains, and equally so at the deliciousness of them! The skull was almost as thin as paper. Shoot a seal in the head and it dies. Shoot a walrus in the head, and the damage is *to the ball*, which immediately flattens, without effecting any injury whatever to the walrus.

"Later in the day I attended another feast in the igloo of Kookin, who had invited his old mother, *Shel-lu-ar-ping*, and two other venerable dames, and I must say that if my friends at home could then have seen how like an Innuit I ate, they would have blushed for me.

"First came a portion of seal's liver, raw and warm from its late existence in full life. This, with a slice of *ooksook* (blubber), was handed to each, and I made way with mine as quick as any of the old adepts. Then came ribs enclosed in tender meat, dripping with blood. How ambrosial to my palate! Lastly came—what? *Entrails*, which the old lady drew through her fingers yards in length. This was served to every one but me in pieces of two to three feet long. I saw at once that it was supposed I would not like to eat this *delicacy*; but, having partaken of it before, I signified my wish to do so now; for, be it remembered, *there is no part of a seal but is good.* I drew the ribbon-like food through my teeth Innuit fashion; finished it, and then asked for more. This immensely pleased the old dames. They were in ecstasies. It seemed as if they thought me the best of the group. They laughed—they bestowed upon me all the most pleasant epithets their language would admit. I was one of them—one of the honored few! * * * * * *

"Sampson was the master of ceremonies; he first made the ladies on the bed give way so as to clear a space whereon he might do the carving; then he placed on this spot the table-cloth, a huge sealskin, ıd upon that put the carcass of a large deer; he then took a boat atchet and began to carve the deer. Slabs of its side were chopped ıd peeled off; chips of ice flew here and there into the very faces of ıe guests at each stroke of the axe. As fast as Sampson rolled off ıe venison other men took the pieces, and by means of a saw and ꞓal-knives reduced them to a size adapted for handling; then Sampɔn distributed these bits, one to each, till every mill had grist to rind. Thus for half an hour Sampson carved; then his hatchet hanle broke off close up to the head. Another axe was sent for, and ıeanwhile, with the half of a saw, the two saddles were divided into ıe proper number of pieces, ready for distribution; the carcass was ıen once more attacked, and the shell was broken, split, and sawed ıto pieces. In it was the 'kernel,' to which all looked with anxious yes; this was at last divided into as many pieces as there were pieces f saddle, and then one of each was given to every guest. I received ıy share with gratitude, and with a piece in each hand began eating. bit off a mouthful of the saddle-piece; it was good. I took a morel of the other; it was *delightful:* its flavor was a kind of sorrel cid; it had an *ambrosial* taste! it fairly melted in my mouth! When early through, I had the curiosity to crowd my way to a light to see vhat this delicious frozen food was, for where I sat I was shaded by arge forms between me and the fire-light. I looked at it, rolled it ver, and looked again. Behold, it was the contents of a reindeer's aunch. On this discovery, I stopped feasting for that night.

Changes in the Kidneys from Lead Poisoning.—Dr. Lanceraux mainains that in the elimination of this poison a change altogether peculiar is produced in the kidneys—a true Bright's disease. The author lludes to cases of fatty degeneration of the kidneys in poisoning by hosphorus, by the acid nitrate of mercury, and by sulphuric acid. n the latter case, he observed that "the cortical substance of the idneys, of about normal consistence, was dotted with red. In the ield of the microscope, there was absence of fat in the tubuli, but estruction of most of the epithelial cells, which formed a finely-granular grayish mass. The walls of the canaliculi appeared intact, but he interstitial connective-substance was altered, and in course of proiferation (nephritis)." The author says that the renal affection coexistent with lead poisoning is not a simple coincidence—that he has always found its characters very analogous, if not identical. He thus sums up the results of his investigations in three cases:—There was, 1st, an advanced stage of lead poisoning, with cachexy; 2d, a lesion of the kidneys, always characterized by inequality of their surface; atrophy of their cortical substance; hyperplasy of the connective-substance; destruction, or even the disappearance of the cellular elements, with albumen present in the urine. This renal affection only succeeds to an advanced stage of lead disease.—*Am. Journal of the Med. Sciences*, from *Brit. and For. Med.-Chir. Rev.*, April, 1864, from *L'Union Médicale*, Dec. 15, 1863.

Persulphate of Iron in Hæmorrhoids.—Dr. Geo. S. Cartwright, Assistant Surg. U. S. V., highly extols (*Cincinnati Lancet and Observer*, May, 1864) the efficacy of the persulphate of iron employed as an ointment in the treatment of hæmorrhoids. It is especially beneficial, he states, in ulcerated hæmorrhoids; or in those whose constitutions are debilitated from diarrhœa, long marches, and excessive fatigue of any kind.

Of several cases which he relates illustrative of the advantages of this remedy, we select the following:—"Major ——, U.S.A., of full habit, has been the subject of slight hæmorrhoids for several years. For the last twelve months has been obliged to travel a great part of the time in a rough vehicle. Applied to me Dec. 5th, 1863. On examination, found a small tumor, external to the sphincter, about the size of a large pea; when at stool it would protrude to the size of a small walnut, and would with difficulty be returned.

"*Treatment.*—Lead water applied freely to the part, and R. ferri persulphas, ʒss., cerate simplex, ℥i. Rub well together and apply on retiring at night. The effect of the persulphas was almost immediate, relieving pain and cauterizing the part. I would state that he had previously used ointment of galls, tannin, opium, &c., with only temporary relief. The effect of the persulphas is permanent, and in the above case he was able to ride on horseback, or take active exercise, within two weeks after commencing the use of the iron, without the least inconvenience. It is now two months since he first commenced the use of it, and has not had any return since.—*Am. Jour. Med. Sci.*

A SUPPER was given by the Faculty to the students of the Medical School, at the Revere House, on Friday evening last, at which His Excellency Gov. Andrew and many physicians were present. The supper was excellent, as was the singing which followed, and all appeared to enjoy themselves. The class is a large one, and certainly an extraordinarily tall one.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 17th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - - -	38	34	72
Ave. mortality of corresponding weeks for ten years, 1853—1863,	37.5	40.2	77.7
Average corrected to increased population - - - -	00	00	85.11
Death of persons above 90 - - - - - - -	0	1	1

BOOKS RECEIVED.—Handbook of Hygienic Practice. By R. T. Trall, M.D. New York: Miller & Wood.

MARRIED,—At Danbury, Conn., Charles W. Skiff, M.D., formerly of New Haven, to Miss Susan R. Tweedy, of Danbury.

DIED,—At Roxbury, Dec. 17th, Dr. John Lawrence Fox, U.S.A., aged 54.—At Tecumseh, Mich., Dec. 5th, of carcinomatous tumor of the liver, Dr. William Baldwin, aged 65.—At sea, off Falkland Islands, July 29th, of consumption, Dr. William James Radford, late of South Boston, aged 43 years.—Killed, in one of the recent battles in Virginia, Lucius M. Sargent, Jr., M.D., Lieut.-Col. of 2d Mass. Cavalry.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 17th, 72. Males, 38—Females, 34.—Accident, 3—congestion of the brain, 2—disease of the brain, 1—bronchitis, 3—cancer, 1—cholera infantum, 1—consumption, 13—convulsions, 5—croup, 3—debility, 1—diphtheria, 3—dropsy, 1—dropsy of the brain, 4—typhoid fever, 1—fits, 1—hæmorrhage, 1—disease of the heart, 2—infantile disease, 6—insanity, 1—diseases of the kidneys, 1—inflammation of the lungs, 7—marasmus, 2—old age, 2—paralysis, 1—peritonitis, 1—purpura, 1—pyæmia, 1—suicide, 1—unknown, 2.

Under 5 years of age, 29—between 5 and 20 years, 5—between 20 and 40 years, 16—between 40 and 60 years, 9—above 60 years, 13. Born in the United States, 50—Ireland, 16—other places, 6.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXXI. THURSDAY, DECEMBER 29, 1864. No. 22.

SCABIES.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

BY JAMES C. WHITE, M.D.

IN the days of our fathers scabies was a disease of frequent occurrence and was the pest of the village school, but it gradually died out under more cleanly ways of living, until in our generation it has become so rare that many physicians do not recognize it even when called upon to treat it. The frequent mistakes in diagnosis which arise through this want of familiarity, the importance of the immediate recognition of its existence in a family, and its marked increase among us within a few years, lead me to ask the attention of the Society to some points connected with its nature, diagnosis and treatment, as they were observed by me in the clinic of Prof. Hebra.

Three forms of the itch insect are met with upon the skin, viz., the female, male and young. The mature female is discernible with the naked eye as a speck, ¼ line in length and ⅙ line in breadth. It is of a white color, and resembles in form a tortoise shell, with an arched back and flat belly. The male is only half the size of the female, and, until recently discovered and described by Boeck and Danielsson in cases of Norway itch, was unknown. In structure it differs but slightly from the female. * * * * It is not white and shining like the female, but black and compressed. The young possess but three pairs of legs, and in them no distinction of sex is noticeable. In order to become mature they undergo, according to some writers, three metamorphoses, according to others only one. Whether all these changes are essential or not, it is at least a fact that the 6-legged form may be found containing within itself a visible 8-legged one. After maturity the females cease to creep over the surface of the skin, and remain in new burrows till sought after by the males. One coitus must suffice to impregnate the entire ovary of the female, for after copulation she burrows deeper and deeper, and forms the long burrows to be more particularly described hereafter. The male never enters one of these true burrows where the eggs are found, but digs himself a shallow cell or seeks new fields for his sexual rambles. The female goes on her downward course obliquely through the epidermis, and leaves behind her each day a new laid egg and masses of fæcal matter. The direction taken must necessarily be oblique, for otherwise the rapid increase of the epidermis from below upwards and discharge of effete superficial layers would allow the escape of the eggs before the proper time. After 14 are thus deposited, the larva of the oldest, which has been gradually pushed up from below, becomes mature, and emerges from its birth-place through the opening made by the mother to undergo the processes above described, leaving behind its broken egg-shell. All stages of development may be witnessed in these eggs, from the amorphous form in which they are deposited, through segmentation, to the perfect young before it breaks its prison. The old female never leaves her hole, and sometimes wanders along for four inches beneath the surface. Fifty eggs and broken shells are sometimes counted in such burrows, although they never contain more than 14 larvæ at one time. If, however, a pustule should be formed the eggs are destroyed, but the female emerges at the surface near the edge of the pustule, and commences her descent anew. The whole time required for the young to reach maturity after impregnation is estimated at six weeks. How long the female may live is not known, but she probably dies at the extremity of her burrow after depositing all her eggs.

The symptoms produced by the presence of these minute animals are of two kinds—the direct or primary, those caused by the animal itself, and the indirect or secondary, those produced in consequence of the scratching. They are both subjective and objective.

The Primary.—We have already seen that the appearances on the skin must differ according to the age and sex of the parasite. The young and males make only a little pit or short burrow for purposes of metamorphosis or nutrition, and at most give rise to the formation of a minute vesicle. It is the impregnated female only which produces the characteristic pathognomonic sign of scabies, the burrow for the deposition of her eggs. These burrows, when closely observed, are found to be linear elevations, running an irregular course, with an uneven surface corresponding to the situation of the eggs within, and terminating at one extremity in a marked prominence, which is the old one at work. Bourgignon considered these irregularities of surface to be caused by openings in the course of the burrow through which the female emerged at night; but, as already stated, it is known that she never leaves her hole, and microscopic examination shows the eggs lying with the long axis perpendicular to that of the tunnel, and that no such communication with the surface above exists. It reveals, also, the presence of numerous reddish brown globular masses scattered throughout its whole length, which are the fæces of its inhabitant. In persons of cleanly habits the burrows are generally distinguishable by their white color, but in classes among which scabies most commonly occurs, they are mostly stained of a darker tint than the surrounding epidermis, from the absorption of dirt and coloring matters. In length they vary, averaging generally from one or two lines to half an inch, but in exceptional cases they may stretch out to three or four inches, although the eggs are much farther apart in such instances, as the number in each individual is probably limited to 40 or 50. The direction they take is slightly zigzag or curved, seldom perfectly straight. When fresh, a small vesicle often marks the point of entrance of the animal, and in other instances the whole burrow is lifted prominently above the surface by the exudation excited beneath it, which may be converted into a pustule and thus destroy the embryos. In rare cases a large papule may be formed beneath the burrow, over the summit of which it may be seen to run. The entrance of the tunnel generally remains open for the exit of the young and for the admission of air. When the disease has existed for a long time they may run into each other, or secondary appearances may show themselves, which obscure the typical forms and present to an inexperienced eye no sign of scabies.

As to the *subjective* symptoms produced by these minute creatures, the plain Saxon name of the disease indicates strongly enough their nature. It is *the itch.* The sensation experienced by the patient is produced in a degree only by the old female. It is the depredations of the young and males, rambling at will over the surface of the body and boring at random into the deeper and sensitive layers of the epidermis, or into the upper surface of the papillary structure, which produce an itching so intolerable as to make a resort to scratching an imperative necessity. The scratching, when once excited, however, is not confined to the local irritation of the affected spot alone, but, owing to the intimate connection existing between the sensitive cutaneous nerves and the pleasurable sensations thus produced, is converted into a general application of the nails to large surfaces of the surrounding skin.

This itching, which is a primary and subjective symptom, leads us from cause to effect, to the *secondary* phenomena of the disease—the eruptive appearances of scabies. It is only necessary to assume that scratching is capable of producing upon a person harboring a colony of sarcoptes the same appearances as upon the skin of any body else, and we may account for all the objective symptoms of this affection, with the exception of the burrows already described, without being obliged to consider the possibility of any such absurdities as a psora dyscrasy or the absorption of the irritating fæcal matter of the insect. Let any one scratch himself roughly on the breast or thigh and study the result. We first see broad red lines corresponding to the irritated parts; this is erythema. The follicles then begin to swell up in consequence of the exudation, or, in other words, a papular eruption appears. Carry on the scratching farther, and we cause an excoriation and hæmorrhage, by which the tip of each papule is colored black by the dried blood, as in prurigo. Again, if we scratch or interfere with the process of an exudation, what is the result? a pustule appears. It is incorrect, then, to say that such and such forms of eruption are caused by this animal. It has nothing to do with them, except to cause an itching, from which they all result. The eczema and vesicles, papules and pustules are wholly caused by our nails and our clothes, and not by the parasite. In individuals who cannot scratch, no such forms are met with. In the beginning of the disease the itching is very slight, but after a fortnight has passed, and the young are beginning to emerge and colonize fresh portions of the skin, it increases in intensity, and leads to more frequent indulgences in scratching, in consequence of which red spots or papules appear about the openings of the hair follicles. By the third week the itching has become so intense as to be no longer satisfied by superficial friction, and excoriation and a pruriginous eruption, tipped with bloody caps, bear witness to the execution effected by the nails. Finally vesicles, pustules, patches of eczema rubrum, and ecthyma, and depositions of pigment follow, and in some cases the extremities may be covered with crusts of the size of a copper cent, and with pigment spots, the seats of old scabs, which might be mistaken for syphilis. The eczema and pustules are at times sufficient to cause the neighboring lymph-glands to swell. These appearances are confined to certain regions of the body, as the chest, abdomen, thighs and hands, not the parts where the burrows are in the greatest abundance, nor are they in proportion to their number, but those which are most easily accessible to the nails. Upon the neck, back, shoulders and lower extremities very little eruption is found. Wherever constant pressure is made, there the appearances will be exaggerated. Those who sit all day, as shoemakers, tailors, and others, have the pustules and papules most developed on the buttocks, just as occurs in the axillæ of those who walk with crutches, and about the waist and under the garters of women. The appearances which the surface of the body presents in those who have had the itch a long time are most variable, and even long after the cause has disappeared, we may find an eruption which would serve as a model to illustrate almost every form of cutaneous disease.

A peculiar variety of scabies is met with in Norway, which is distinguished by the formation of huge crusts upon the surface of the skin like rupia, and by the presence of the parasites upon the face and even beneath the nails. Its frequent occurrence in that country and its rarity in other places, only some half dozen cases having been observed elsewhere, has led to the supposition that the disease was caused by some peculiar form of acarus, but Hebra has shown that the crusts consist of dried epithelium, dead sarcoptes and their fæces, and that beneath the whole epidermis is undermined by swarms of animals, adults of both sexes and young, living without burrows, which are identical with the ordinary variety. It was in such social colonies that the male was first discovered and described. This form leads often to serious complications, as immobility and great swelling of the limbs, as in elephantiasis, with severe pain and inflammation, and is at times confined to a circumscribed part of the body, while the rest of the surface is affected in the usual way. We seek in vain for a satisfactory explanation of this form of the disease. Hebra thinks that great uncleanliness and indifference may be the cause, but the fact that it often affects parts usually exempt, is opposed to such an opinion. Küchenmeister thinks that some endemic influence or constitutional peculiarity alone can explain the greatly exaggerated exudative process. It yields as readily to treatment as the ordinary forms.

Diagnosis.—We see, therefore, that scabies presents a varied combination of appearances capable of misleading any one who does not carefully analyze them. We must always bear in mind the importance of recognizing the primary phenomena of the disease, which furnish positive evidence in any particular case. We cannot, therefore, make ourselves too familiar with all that pertains to the habits of the sarcoptes and its marks upon the skin, and even at the risk of repetition we shall explain the means to be employed in our examination. As has been remarked, the favorite spots for the burrows are the commissures and lateral surfaces of the fingers, the hands, penis, nates, feet, and folds of the axillæ, and in women the breasts, while in children we may find them equally distributed over the whole surface of the body. They may affect any part of it, in fact, except the head, although Hebra has cultivated them upon the face and scalp. It is the hand of the patient we first take up to examine, if we suspect the presence of scabies, for the collection of foreign matter, with which they continually come in contact, colors the burrows of a dark tint. If, therefore, we see streaks or spots which resemble such a burrow, we have only to rub it with some dark coloring matter, as ink, and then endeavor to wash it off, and if we really have to do with scabies we shall find that the pigment has penetrated beneath the epidermis and cannot be removed. If we fail to find the burrows on the hands, for owing to some occupations these are at times an unpleasant dwelling place for the sarcoptes, we should examine the penis, where, from the yielding nature of the tissues and the undisturbed quiet, we find the most perfect specimens of animals, eggs and burrows, or, in a person of sedentary habits, the buttocks. The specimen exhibited to the Society was snipped from the glans with a fine curved scissors by Prof. Hebra. This may be done without much pain to the patient, for it is not necessary to go deeply to cut out the whole burrow and animal intact.

In persons who suffer from cold hands and feet we often find these parts entirely free, while the rest of the body may be covered with the eruption. This is corroborative of their love of heat, and when a person lies habitually on one side in bed, we sometimes find that side of the face affected, while that exposed to the cold remains untouched. Another exemplification of the same law may be seen in the immediate relief which a patient, wrought almost to frenzy by the itching of a general scabies at night, finds by jumping out of bed into the cold atmosphere of winter. The animal is best obtained from its burrow in the way above mentioned, or we may open the elevated track with a sharp knife or needle, and find it at its extremity. The males may be found with a lens upon the surface of the body, near the burrows of the females or slightly embedded in the skin, appearing as a dark point. The young are generally found in fresh vesicles or in the epidermis undergoing their metamorphoses. We may often detect the lurking place by rubbing the suspected spots with German soap, and in twenty-four hours an exudation will follow and elevate the burrow. In this way we may often settle doubtful cases. By transporting a colony to one's arm the customs of the animal may be easily observed with a lens, and we see that they seldom or never go below the epidermis. In order to enter this, the acarus supports himself on his anterior end by means of its long posterior bristles, and works away with his lobster-like claws. It usually takes one fourth or one half an hour to penetrate the outer integument, but this once pierced its progress is more rapid. When coming in contact with the nerve papillæ it causes a stinging sensation. The poorer in nutriment the epidermis, the deeper it penetrates and the greater the exudation caused, which lifts up the animal and gives the white color to the hole. The young brood seems to require the tender and last-formed epidermal layers for its food, and therefore bores deeper and produces more itching and exudation. When wandering about on the surface they produce no exudation whatever, but on the genitals and upon infants, where the epidermis is very thin, they are obliged to go deeper, whence the large exudation which ensues in such cases. It is a commonly received opinion that the parasite is to be found either within a vesicle or, as it is said, a little way from it, without any apparent reference to the existence and importance of the burrow. In the majority of cases the vesicles have no connection with the position of the animal, and in the exceptional cases contain only the young, or are situated at one extreme end of this canal, while the game hunted is at the other. Wilson has added to this confusion by giving, as one of the important diagnostic signs of scabies, "a peculiar scaliness and undermined state of the epidermis," from beneath which the animal may be extracted. This scaliness we have never observed, but we should literally as soon think of looking for a needle in a haymow as to attempt to extract an acarus until we had found a burrow, and a fresh one. In case none such can be found, we may still hope to obtain the proof we seek in the dried eggshells and fæcal masses the old burrows contain; or if this opportunity even is wanting, we may perhaps be fortunate enough to chance upon a vesicle which contains the young or a portion of its cast skin. Neither can we understand why it is that this writer should make the extraordinary statement that "one of the most remarkable phenomena of scabies is the localization of the acarus to the hands, while the eruption excited by it may be spread more or less extensively over the entire body." This is quite as incorrect as many of his statements with regard to vegetable parasitic affections. It is true that among the favorite lurking places of the animals are the folds of the skin between the fingers, for there they find the conditions of warmth and moisture they prefer; but, as we have seen, they affect as well the penis, folds of the axillæ and nates, and were we in search of a specimen we should turn first to these latter regions, where the burrows are less interfered with. Cases occur, however, and not unfrequently, where from the peculiar situation of the disease, or from interference either by the patient or by treatment, all immediate signs of the presence of the animals are wanting, where no burrow, fresh or dried, and not even a vesicle is to be found. Are we, in fact, able to recognize scabies by any peculiarities in the gross or secondary appearances? In the great majority of cases we are. We should examine carefully the whole body, notice the locality and character of the eruption, the appearances about the hands and feet, upon the penis and upon the nates, and if we have once thoroughly studied and understood the little peculiarities which give individuality to the multiple appearances of the disease, we shall readily recognize its nature, even when complicated by the simultaneous occurrence of an eczema or other cutaneous affection. We strongly insist upon the necessity of a careful attention to all these points, so important in diagnosis, on account of the great number of cases in which no other signs are present, and the frequency with which mistakes occur in consequence. We have repeatedly seen cases of well-marked scabies treated for a long time as some other disease, in which typical burrows were staring the physician in the face all the while, and again others which were equally unmistakable on close examination, though not so striking, called lichen or prurigo, when the microscope revealed the presence of the parasite. There is, in fact, an indescribable expression in the features of a case of scabies which can hardly be mistaken by any one who has once had the opportunity of seeing a large number of patients known to be affected with this disease. In cases of very long standing, or when confined to the hands, all specific appearances may be merged in those of chronic eczema, so that we may only suspect, not feel entirely sure in our diagnosis. In such cases we should always adapt our treatment to our suspicions, and at least remove all doubts with regard to the future character of the eruption by the application at once of our parasiticide.

Ætiology.—Scabies is found all over the world, but who had the first sarcoptes is a question not easily answered. It may have originated by transference from some other animal, for the same species is found parasitic on camels, lions and other animals in menageries, although it may have been man who affected the brute in such instances. We know that the mange of domestic animals, as the horse, pig, dog and cat, is capable of producing upon the skin of their keepers appearances similar to those of true scabies, but these are never of long duration, and yield much more readily to treatment than those produced by the sarcoptes hominis. We never see here in these days such cases of scabies as are met with in a European hospital. In Germany the old system of apprenticeship and its attendant wanderings through the land is still kept up, and in this way the disease is borne from one part of the country to another. Master workmen have generally but one bed for four apprentices, and the linen is seldom if ever changed. Scabies until recently has been comparatively rare here, although it has sometimes run through a school or orphan asylum, or found its way into a good family, the young lady members of which often bear it about for a long time before suspecting its true nature. Of late years it has been quite largely introduced into the country by the crowds of immigrants which pour into our large cities. Every ship that arrives with such a freight brings scores of fresh cases of the disease, which spreads rapidly during the voyage, owing to the close quarters and want of cleanliness, and which serve as so many new centres of contagion wherever their inmates settle. The child carries it to the school and gives it to its playmates, and the older girl communicates it to the children or fellow servants at the place she takes. We have recently known an instance where it was started in this way in a small manufacturing town but a few miles from Boston, and was introduced into a large number of families before its real nature was understood. Returned soldiers bring it frequently with them from camp, and leave it behind as a constant reminder of their furlough. The mode of infection consists in the transfer of individuals from one host to another. This is accomplished in the majority of cases, without doubt, by the young and males, for, as we have seen, the mature female never leaves her hole. The acarus is an animal which loves the warmth, and on this account has been called nocturnal, but without good reason. The wandering and activity are excited only by the warmth imparted to the body by lying in bed, by sleeping with others, and by dancing, when hands are freely interchanged, and thus it is that the parasites are conveyed from one person to another. The nurse gives it to the child by placing her hand beneath its little nates, and so bearing it about. It may also be conveyed by wearing the clothes of any body afflicted with it, for both eggs and insects possess an obstinate vitality, and may exist months without food. It may happen occasionally that the old animal is scratched from its hole and thus transferred to another part of the same host or to a bed-fellow. We see, therefore, why it is that in some cases a person exposed to the disease may not exhibit any other symptoms than a solitary unnoticed burrow for weeks, until the young begin to make their appearance upon the surface, whereas in other cases the transference of the affection may be accomplished by several young or males, which begin their provoking rambles at once and cause an immediate eruption. It is this circumstance, principally, which determines the so-called period of incubation, and not, as Mr. Wilson says, the particular temperament, climate, season, age, confined air, &c. Scabies is seldom, if ever, caught by handling patients, however freely this may be done, and physicians and nurses are seldom infected. In one instance only, and that on an intensely hot day, did I ever see infection follow thousands of such contacts between patient and student. There must be many cases, however, where such transfer takes place without any result, for should several males or an unimpregnated female alone be conveyed to a fresh skin no general scabies would follow.

Treatment.—The chief indication in the treatment of scabies is of course to destroy the insect and its eggs, if possible. Any means which will accomplish this without injury to the skin and in the shortest time, is of course the best. The use of internal remedies belongs to the days when a belief in a dyscrasy prevailed, and nothing need be said about it. It will be needless to mention all the numerous remedies which have been used at various times and among different nations. Nearly everything has had a trial, but the remedy to kill the eggs as well as the insects is yet to be discovered. Among them all, one substance has attained a reputation which has made its use universal. Sulphur in some form, as a gas, as an acid, as a salt, in form of bath, or ointment, or tincture, either alone or mixed with other substances, is employed all the world over. There is, however, a great difference in the effect of the various preparations both upon the patient and upon the disease; and a knowledge of these effects is essential to a proper selection. Sulphur baths once employed, required weeks to produce any permanent effect, and were extremely disagreeable. Still less can be said in favor of the sulphur vapor bath, which, when used of sufficient strength to produce the desired results upon the parasite, usually causes so extensive an eczema as to require weeks of after-treatment for its removal. Simple sulphur mixed with fat (sulphur ointment) rubbed thoroughly into the skin, will in time cure the disease, but the process is a long one, and, when pushed to the extent to which the English use it, seldoms fails of causing an artificial eczema. A more rational plan is to add to the preparation some substance which will more speedily remove the outer layers of epidermis, and allow the sulphur to come in direct contact with the animal. Such a substance is an alkali, and this combination in some form is at the base of all the various remedies and cures of the day. Among these, perhaps, Helmerich's ointment is the best, and it is this preparation modified which is employed by Hardy in his quick cure at San Louis Hospital. The original formula is:—Sulph. flor., ℥ ij.; pot. subcarb., ℥ i.; adipis, ℥ viij. Hardy uses lard, 300 parts; sulphur, 50 parts; and subcarbonate of potash, 25 parts; and his whole treatment lasts but an hour and a half. For the first half hour the patient is rubbed from head to heel with soft soap; during the second he is kept in a warm bath, and the third period is devoted to a universal friction with the above ointment. Bazin uses Helmerich's ointment unchanged, but employs two frictions instead of one. The patients are immediately dismissed, and are not again seen. In the majority of cases the quick cure is sufficient to overcome the specific character of the affection, but it by no means cures the other appearances which form so important a part of scabies, and relapses will frequently occur, for it is not so easy to remove every egg at once. Three or four days is a much safer period to keep the patient under observation and treatment.

Another improvement suggested itself to Wilkinson, in the addition of some substance to prevent and heal the eczema caused by the use of sulphur in the above preparation, and some gritty matter to render the friction more effectual, and he accordingly added tar and chalk, in the following formula:—sulph. venal., ol. fagi, sapon. domest., adipis, aa libram; cretæ, ℥ iv.; ammon. hydrosulph., ʒ ij. This ointment was modified by Hebra by the omission of the last ingredient as useless, and by a diminution in the quantity of sulphur to lessen the tendency to eczema, and for a long time he treated most successfully the great number of patients under his charge with the following preparation—sulph. venal., ol. fagi, aa ℥ vi.; sapon. viridis, adipis, aa libram; cretæ, ℥ iv. M. In cases where fat could not be employed, a more cleanly tincture was made by substituting alcohol to the same amount for the lard in the above formula. The action of this combination of remedies may be thus explained. The alkaline soap, assisted by the mechanical action of the chalk, removes the external layers of epidermis and opens the burrows, the sulphur acts as a parasiticide upon the animal, and the tar prevents the eczema, while the alcohol carries into the parts most deeply affected these active principles. The method pursued by Prof. Hebra until quite recently was as follows:—The patient is put into a warm bath, where he remains for half an hour. Then a piece of coarse blanket is smeared with sapo viridis, and with it every finger and portion of surface must be thoroughly rubbed. This is to be washed off in the bath and the skin to be dried. Then the ointment or tincture is thoroughly applied to the whole body, or in slight cases to the parts affected only, and the patient is carried to a warm chamber, where he remains until the next day, when the same process is repeated, and this treatment is pursued until itching no longer exists. Three baths are all that are allowed, unless many pustules are present, when more will be beneficial. The patient can be treated in this way at evening and continue at his work by day. In mild cases and tender skins, the modern sulphur soaps will be found of benefit, or we may use for ladies the following preparation introduced by Bourgignon:—Ol. lavend., ol. menthæ, ol. carophyl., ol. cinnam., aa ℈ i.; gummi tragacanth, ʒ i.; potas. carb., ℥ i.; lac. sulph., ℥ iij.; glycerine, ℥ vi. M. Within a few years, however, Prof. Hebra has employed the Vleminckx solution entirely in the treatment of this disease. This method was introduced by the Surgeon-General of the Belgian Army, and its effect was found to be so satisfactory as to lead to its trial with the most eminent success in other cutaneous diseases. The formula for its preparation is as follows:—Sulph. flor., ℥ ij.; calcis vivæ, ℥ i.; aquæ, ℥ xx. Boil till ℥ xii. remain, and filter. We obtain in this way a clear orange-colored liquid, the expense of which is but very little. We get, accordingly, the necessary alkaline action, combined with the sulphur in a penetrating form, and the result is all that could be desired. The only objections to its use are its irritating effect and unpleasant odor, but the necessity for its use is limited to so short a period that they amount to little. It is applied in the following manner. The patient must rub his whole body thoroughly at night with a flannel cloth wet with the solution for half an hour. He then takes a warm bath of an hour's duration, during which the sulphur is washed from the skin, and subsequently a cool sponge bath of pure water. An application of some fatty substance or of a thin solution of oil of cade may then be used if necessary.

One or two repetitions of this process will be sufficient to cure the most severe cases of scabies. We have employed this method of treatment repeatedly, and have never known the itching to fail to disappear almost entirely after the first application; but should it return at any spot, subsequent treatment may be confined to this locality.

Whichever of these three most deserving methods—that of the Helmerich's salve, of the Wilkinsonian ointment or tincture, or of the Vleminckx solution—we choose to employ, we must remember that there remains to be treated the secondary eruption, after the parasitic element has been eradicated. In mild cases it will disappear of itself, but in the severer and long standing forms it is necessary to apply the same principles of treatment which were mentioned in connection with eczema. We must also bear in mind the fact that a continuance of the specific treatment, after it has fulfilled its object, may of itself provoke appearances which the physician only creates while endeavoring to cure. The after treatment of scabies consists of an avoidance of all past sources of contagion and of baking in an oven the clothes previously worn.

RUPTURE OF THE CRYSTALLINE LENS BY A BLOW.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—The following case presents features that may be of some interest.

J. H., aged 73 years, applied to me for an opinion respecting his eyes. He stated that, six months prior to his calling on me, a stick of wood which he was splitting flew up and struck his left eye. He suffered very great pain from the blow, and sent for his family physician. After treating him for a time, his physician turned the case over to another gentleman regarded as having more experience in diseases of the eye. When, finally, his attendant had pronounced the eye recovered from inflammatory action, the old man was dejected, since no useful vision remained. He was told that a cataract existed in the right eye, and that one was forming in the left. He was advised to wait a *year or two*, and then have an operation performed. A year or two, at his age, appeared to him to be an unwarranted assumption.

On examination, I found a cataract in the right eye, which, the patient said, had been blind a good many years, but *quantitative* perception of light was good. With the left eye he had indistinct vision of objects, and, on examining this with the ophthalmoscope, I found that the crystalline lens was missing. Presuming that dislocation of the lens had occurred, I endeavored to discover that body by placing his head in various positions, but I was unsuccessful. Synchysis of the vitreous also plainly existed.

I kept the case under observation for a few weeks, until I was satisfied that no morbid action was going on, when I extracted the cataract from the right eye. I made a superior section. Recovery was prompt and uninterrupted, and in two weeks I fitted him with spectacles. Both eyes are now in excellent condition, and he reads the newspaper with ease. Doubtless the violent blow had not only dislocated the lens, but had also ruptured the capsule and resulted in a solution of its contents. C. A. ROBERTSON, M.D.

Albany, N. Y., December, 1864.

ON THE DISTAL COMMUNICATION OF BLOODVESSELS WITH THE LYMPHATICS; AND ON A DIAPLASMATIC SYSTEM OF VESSELS.

BY THOMAS ALBERT CARTER, M.D., M.R.C.P.

IN this paper the author has recorded the results at which he has arrived concerning the distal intercommunication of the hæmal with the lymphatic system by means of injections thrown into bloodvessels; he also describes certain minute vessels and networks of vessels which can be shown by the same means to exist in certain mucous membranes and elsewhere. These he has named diaplasmatics.

The author's attention was first particularly called to the relation which the lymphatics bear to the bloodvessels, by observing that when the latter are fully distended with a very penetrating injection, such injection often finds its way into the lymphatics without the occurrence of ordinary extravasation.

He has thus injected the livers of three human beings and of three pigs from the portal and hepatic vessels, the former (vessels) being filled with Turnbull's blue precipitated in gelatine, and the latter with carmine similarly treated; and in each instance he has found that the injection had gained entrance to the superficial lymphatics.

In sections taken from the surface of the pig's liver, these vessels (which may readily be distinguished from the bloodvessels by their knotted irregular appearance and rapid increase and diminution in size) are observed in many instances to surround a lobule, throwing out loops and prolongations towards its centre. A certain number of these prolongations, both in the human liver and in the pig's, when traced are seen to diminish in size so much as to be considerably less in diameter than the capillaries of the organ, in which they appear to lose themselves or rather originate. Their commencements in this part, it is acknowledged, are extremely difficult to determine by simple inspection, on account of the underlying capillaries being filled with injection of the same color; but in some instances (as, *e. g.*, where the pigment in the capillaries has faded) the author believes that he has seen the actual anastomoses of the two sets of vessels. The circumstance, however, which renders exact microscopic observation so very difficult, is the one which affords the best evidence of the communication of the two systems, viz., that the minutest lymphatics are almost invariably filled with injection of the particular tint seen in the capillaries in close relation to them. Thus if the capillaries be red or blue, or any of the intermediate shades of purple, the smallest lymphatics in the immediate neighborhood will be of a precisely similar color; which would appear distinctly to show whence the lymphatics derive their supply of fluid.

A human thyroid body which the author injected with carmine and gelatine from the bloodvessels, also exhibited a phenomenon similar to that observed in the organs just mentioned.

Sections taken from this gland and examined with the ¼-inch objective, showed that from the capillaries are given off fine processes which break up into a network among the cell-elements of the vesicles, and, furthermore, that this network is in communication with the lymphatics which lie in the intervesicular parts of the gland. In addition to this, however, there are communications between the capillaries and lymphatics in the stroma itself.

The processes which emerge from the capillaries in the stroma of the thyroid as well as in the fibrous tissues of other parts, such as the membrana nictitans of the cat, bear a very strong resemblance to connective-tissue corpuscles; and such the author considers them to be in these parts. But as these tubular processes can be shown by injection to form a plexus in the retina (cat), to be connected with the nuclei of the capillaries, the corpuscles of bone (perch and mouse), and the fusiform bodies found among the fibrillæ of muscle (frog), as well as with the cells of connective tissue and its modifications, it has appeared that the whole of these structures belong to one system of vessels. This system the author has named, provisionally at least, "Diaplasmatic," because, on account of the extreme minuteness of its channels, it can only allow of the passage of the liquor sanguinis.

To designate the whole of these minute vessels lymphatics would, he considers, at the present time be somewhat premature, because those of muscular fibre and of bones, and others which will be mentioned immediately, have not been observed to join recognizable lymphatic trunks; and, moreover, it would seem by no means improbable that some of them may both commence and terminate in the bloodvessels, thus constituting what might be styled an intercapillary plexus; or they may even have a triple connection, viz., with the arterial capillaries, the lymphatics, and with the venous capillaries or the veins.

The position in which the diaplasmatic network may be most readily demonstrated, both with and without injection, is in the mucous membrane of the palate of the frog or toad. In this part, when the viscid mucus and the ciliated epithelium have been removed, there may be seen with the $\frac{1}{4}$-inch objective, a very minute granular nucleated network, in each mesh of which is placed a globular nucleated cell. The membrane consists, therefore, of three layers—of a superficial ciliated layer, next of a granular nucleated plasmatic network, and lower still, of a basement layer of globular nucleated cells. The processes of the middle granular plexus extend not only in the horizontal direction, but also upwards between the ciliated cells, and downwards between those of the basement layer, where they become continuous with the bloodvessels lying in the fibrous tissue beneath. This connection with the bloodvessels, the author says, he has been able to make out by means of injection in the palate and œsophagus of the frog and toad, as well as in the mucous membrane of the eyelid of the latter animal. He has also demonstrated by injection that a network similar to the one just described is present in the web-membrane of the pectoral fin of the perch. The lung of the toad also exhibits a modification of the plasmatic network in the form of extremely fine hollow processes, which either stretch completely across the mesh from capillary to capillary, or terminate in finely pointed or blunt extremities among the epithelia or nuclei which stud the membrane of the air-vesicle.

In the proper epithelial portion of the skin of batrachians or of mammals, the author has not yet been able to prove distinctly that the plexuses are to be found, but he has been so far successful in this direction as to have displayed them satisfactorily in the follicles and bulbs of the whisker hairs of the mole, mouse, and kitten. From certain observations, however, which cannot here be detailed, he thinks it more than probable, not only that plasma-networks are present in the epithelial layer of the batrachian skin, but also in a corresponding part of the human cutis.

With regard to the offices performed by these networks, the author thinks it probable that all those found in the epidermal or mucous tissues are intimately connected with the function of secretion, and in a minor degree also perhaps with that of absorption; while those situated in the deeper parts of the organism, such as muscle and fibrous tissue, are employed in conveying blood-plasma to, and effete matters from, the tissues through which they pass or with which they may be in contact.—*Proceedings of the Royal Society.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 29, 1864.

Itinerant Lecturers on Anatomy and Physiology.—It is one of the unfortunate results of the general thirst for knowledge that the community is always at the mercy of the class designated above. Almost all other branches of human study can be studied quite satisfactorily with the means and appliances at command in our various educational institutions. But let one of these vagrants claim the popular ear, and at once crowds flock to hear him, eager to drink in the mysteries which his pretentious exhibition of papier maché caricatures of the human organism, and his unblushing promises to remove the veil which preserves the decencies of society, lead them to expect the revelation of. Boston has recently suffered from the infliction which such a visitation brings, and it is truly painful to reflect with how much pecuniary success to himself such a violator of the proprieties of a refined community was rewarded. We must confess it was a matter of some surprise to us that he was suffered to flaunt his indecent advertisements in the very face of the public without any interdiction from the police. The offer to exhibit the poor, mummified remains of a frail daughter of humanity, who had once been a great Paris beauty, and of a perfect model, of the most life-like reality, of a most exquisite female form, to the prurient gaze of the curious, was suffered to stand unrebuked for many days in one of our most thronged public thoroughfares. And we could not but feel that the contamination of that man's influence on the minds of our youth during his brief stay, judging by his programmes, at least, was strong enough to destroy in them the power of many a precept of morality and purity.

Most artfully do these pretenders play their game. Gifted, it may be, with some readiness of speech, undoubtedly with immeasurable assurance, the sacredness of the subject which they handle conceals from very many innocent people the real object that they have in view. As the devil can quote scripture successfully to serve his own ends, so do these servants of his make easy dupes of silly women and weak-minded men. Generally their plan is to get some unsophisticated clergyman to lend them the weight of his influence. Laudatory resolutions of thanks, urgent requests, enforced by a vote of the audience (so artfully prepared that the hand of the secret wire-puller does not appear), call for a repetition of what has already been said once too often, and so fresh fuel is heaped on the fire of public excitement. In the mean time, in the intervals between the public exhibitions, what can more profitably or benevolently occupy the leisure of the gifted apostle of truth than to lighten the burdens of the medical profession here by offering to administer to the poor sufferers from bodily infirmities at his own apartments ; not without due consideration, of course. Such is the oft-repeated game. And what wonder that the author of the daily oracular paragraphs in the newspapers, the inspired orator who is compelled by the popular voice to reiterate his public harangues, should find his private receptions only less thronged than his more capacious hall of audience? An illustration of the pretensions of the last itinerant of the kind we are speaking of has just come to our notice.

A young man, with manifest symptoms of phthisis, established by the repeated examinations of several physicians amongst us most competent to form the diagnosis, whose limited circumstances compelled him to be the beneficiary of one of our public charities, was induced by the urgent solicitation of a credulous relative to submit himself to his examination and treatment. Of course a liberal fee was demanded and paid ; albeit his former medical adviser was never a cent better for the numerous interviews in which he had willingly given him the benefit of his professional knowledge. As might have been expected, the oracle at once pronounced the opinions of his physicians erroneous. He required the patient to breathe three full inspirations with the mouth closed. He then asked if he felt pain. Being answered in the negative, he told him that if he had had consumption he could not have done that without pain. Then applying his ear cursorily outside of his waistcoat and manipulating his chest a little, he declared his disease to be "*dyspepsia of the stomach!*" The patient being not quite willing to acquiesce in so complete a contradiction of the opinions of the physicians he had consulted, expressed some doubt of the accuracy of this opinion, and modestly intimated that he thought they could not have made so great a mistake. Why, said the inspired lecturer, "there is not one physician in a hundred who can tell you what is the matter with you," and reiterated his astute diagnosis. Such are the men who fill the editorial columns of our daily journals with puffs, whose advertisements disgust the decent reader, who are the pets of thousands of soft-headed dupes, and who, during their short stay, contrive to line their pockets with such earnings as years of patient labor can hardly command for the honest and reliable practitioner. When will the community learn wisdom in these things? Surely this is a sore evil under the sun.

MASSACHUSETTS MEDICAL BENEVOLENT SOCIETY.—We omitted to notice the annual meeting of this Society, which took place Oct. 27th. The following officers were elected for the ensuing year :—*President*, Dr. A. A. Gould. *Vice President*, Dr. H. W. Williams. *Treasurer*, Dr. F. Minot. *Secretary*, Dr. A. D. Sinclair. *Trustees*, Drs. S. L. Abbot, J. B. Forsyth, J. P. Reynolds, L. Parks, Jr., W. W. Wellington, S. Salisbury, W. B. Morris, C. E. Ware, C. G. Putnam.

The Treasurer stated that the balance in his hands at the close of the financial year was $1279.22, and the funds of the Society amounted to $3589.92, which is invested in United States Securities or in Savings Banks. The number of members is about 90.

It may not be known to some of our readers that the object of this Society is to afford relief to destitute physicians and their families. Few practitioners are able to lay up anything from their hard-earned income ; the great majority are barely able to live, and in the event of their death in middle life must leave their families unprovided for. Others are compelled by sickness to become burdens upon their friends or the community. A very moderate annual payment (two dollars) enables members of the Society to claim relief when their circumstances require it. The payment of twenty-five dollars constitutes life-membership, and the donation of fifty dollars, or more, at one time, entitles the donor to be inscribed among the Benefactors of the Society.

Owing to the political excitements of the past few years the Society is comparatively little known. We commend it to the attention of those of our brethren who are not already members, and of the benevolent generally, trusting that both the number of its members and the amount of its funds will be speedily augmented.

DARTMOUTH MEDICAL COLLEGE, HANOVER, N. H.—The annual commencement at this institution took place Oct. 28th, 1864. The annual address was delivered by Dr. J. P. Bancroft, Superintendent of the New Hampshire Asylum for the Insane, one of the delegates from the New Hampshire Medical Society. The following are the names of the graduates, with their residences and the subjects of their theses :—

James F. Brown, Candia, General Dropsy.
Edward R. Baxter, Sharon, Vt., Cystitis.
Hanson C. Canney, Banstead, Vaccination.
Albert A. Chase, Meredith, Scrofula.
John R. Cogswell, Brownington, Vt., Delirium Tremens.
Thomas B. Dearborn, A.B., Augusta, Illinois, Phthisis Pulmonalis.
Edward J. O'Donnell, Mason, Enteric or Typhoid Fever.
Moses C. Eaton, Wentworth, Typhoid Fever.
John M. Fitz, Warner, Malaria.
Charles Hayes, Berwick, Me., Intermittent Fever.
Victory Hobbs, North Hampton, Rubeola.
George F. Hubbard, Claremont, Burns and Scalds.
Simeon Hunt, A.B., Rehoboth, Mass., Inogenesis.
Luther F. Parker, Peacham, Vt., Diphtheria.
Abel P. Richardson, Paper Mill Village, Dyspepsia.
William S. Robbins, Norridgewock, Me., Hæmaturia.

John F. Saville, Quincy, Mass., Yellow Fever.
Phineas H. Wheeler, Banstead, Acute Rheumatism.

Old Age.—There are few subjects on which the common impressions of men are more at fault than in respect to the proportion of our New England population which lives to old age. Ask the first man you meet, provided he be one who has never had occasion to examine the matter definitely and carefully, how many of our New England people (i. e., one in how many) live to be seventy years old; and very likely he will answer you, "not one in a hundred," or "not one in fifty." Death is a very common circumstance in this world, and so many die in infancy and childhood, that it comes to be regarded as something quite uncommon for a person to live to old age. Our Massachusetts statistics show that more than one in five of our native-born population live out their "three-score years and ten." If any one doubts this statement, the facts to confirm it are abundantly set forth in our annual State registration reports.

But we wish for a moment to turn the attention of the reader to some considerations, which will help him to the truth, without recurrence to tables of life statistics. Let him go back to the families which he himself has known—if he be an old man, to those that started in life with him; or, if he be a young man, to those who were the contemporaries of his father and mother—and if he finds a family in which there were ten children, see if two of them at least did not live to be seventy years old. He may, it is true, hit upon a family where, through the prevalence of consumption, or some other form of hereditary disease, or through some strange combination of outward circumstances, all the children have died young. But the compensation for this will be, that he can easily find another family, in which all, or almost all, have lived to great age. A case just reported in the papers, in connection with a death in the town of Hamilton, is exactly in point:—

"In Hamilton, 30th ult., Benjamin Dodge, 74 years 7 months. He was the last of a family of thirteen children, whose father died at the age of 78, the mother at 94. One of the sons died at the age of 40, seven other sons lived to be from 74 to 90 years old, and the five daughters were all past 60 at the time of their death."

In the family of the late Dr. Noah Webster were three sons and two daughters, no one of whom died until nearly 70, while the three sons lived to be 80 and upwards. The long-lived families may therefore be set over against the short-lived, and when the balance is struck, the case will be found as we have stated.

Take another class of facts. Harvard College has been in existence more than 220 years, and Yale College more than 160 years. The average age of young men when they graduate at Yale is between 21 and 22 years, and at Harvard a little less. Now it is no very uncommon circumstance to find that half the members of a class are alive at the end of fifty years from the time of graduation. The history of both colleges will show many instances of this kind. If we mistake not, the class of 1811 at Harvard, of which Hon. Edward Everett was a member, had nearly half its number alive at the time of the class meeting in 1861. And the men thus living must be at an average of more than 70 years. The general law, however, respecting our college graduates, will show a somewhat lower ratio than this. The living, at the end of fifty years from graduation, will be usually between one third and one half of the class.

The chances for living to old age in New England are good. There are few spots on the face of the earth better, in this respect. We sometimes talk about our bleak west and cruel east winds, as if they carried consumption and death into every household. We speak of our sudden and violent changes from heat to cold, and from cold to heat, as if everybody must go down under such sharp meteorological changes. But the truth is, on the broad scale, and in the long run, there is health rather than disease in these biting winds and decisive changes. The atmosphere is purified, and the system is toned up by the operation of these causes, which seem to us, at the time, "not joyous, but grievous."—*Boston Daily Advertiser.*

A curious question relating to medical responsibility has just been decided in the Paris Appeal Court. It appears that some time since a man and his son became patients at the private clinic of M. Desmarres, the celebrated Paris oculist, in which some 10,000 cases are annually treated, and after a while the father lost both and the son one of his eyes, in consequence of purulent ophthalmia. The patient proceeded against M. Desmarres before the Correctional Police, claiming 10,000 francs as compensation. This tribunal decided against him, but, in doing so, expressed its regret at finding that the attendance at the clinic devolved upon M. Desmarres' son, a young man twenty-two years of age, and then only a student, though since become a doctor of the Montpellier Faculty. Hereupon the patient instituted a civil action, laying his damages at 60,000 francs, and the Court before which it came on for hearing declared that if, by any negligence of M. Desmarres or his agents, the patient became the subject of contagious disease, or what was a curable and mild affection degenerated into an incurable and dangerous one, reparation could be obtained. The plaintiff declared that he had been exposed to the presence of persons with contagious affections of the eye, and that he had been unskilfully treated, having, in fact, received only the attentions of the young Desmarres, when he had been led to expect those of so experienced an oculist as M. Desmarres, sen. This last plaint was at once put aside, inasmuch as he became aware from the first day that M. Desmarres *fils* managed the Dispensary, and he was at liberty, if not content therewith, to discontinue his attendance. But to enable it to decide whether the other allegation was correct, namely, that a simple disease of the eye was by needless exposure or neglect of treatment converted into a dangerous one, the Court proposed to submit the matter to MM. Nélaton, Béheir and Richet, as experts, who should declare under what diseases these patients labored when they entered M. Desmarres' clinic, together with the nature and causes of the transformation they underwent; how far contagion had been operative, and whether the necessary care and skill had been bestowed. Against this decision M. Desmarres appealed, declaring that, however cheerfully he would submit to the critical appreciation of the eminent men named by the tribunal, what was now demanded at their hands was a pure impossibility. These patients had lost their sight from purulent ophthalmia, and there was really nothing for experts to determine upon. The Court of Appeal took this view of the case, declaring that a retrospective examination of treatment of a disease, the nature of which there is no proof of, is impossible to be made by the aid of experts and witnesses in a satisfactory manner. And thus this cause, which has been pursuing its harassing course over two years, terminated in favor of the defendant, who we fear will, as is usually the case on such occasions, be yet considerably out of pocket.—*Medical Times and Gaz.*

ANOTHER CURE FOR ITCH.—Dr. LE CŒUR recommends the cure of itch by the pleasant application of aromatic vinegar. He has for years employed this simple economic remedy, with constant success. The vinegar should be rubbed in with a roughish sponge. Four or five frictions generally effect a cure. A warm bath will remove any erythema which may arise. "I recommend my *confrères* to try the remedy."—*Med. News,* from *Brit. Med. Journal.*

Prof. CHAS. A. LEE, of the Medical Department of the Buffalo University, recently delivered a valedictory address to the class previous to his departure for New Orleans, whither he goes for the benefit of his health. As a token of esteem and affection on the part of the pupils, a cane was presented to him.

The class for the present season in the Medical College of Ohio, is stated to be about one hundred and sixty.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, DECEMBER 24th, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	56	38	94
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.8	39.1	80.9
Average corrected to increased population	00	00	88.61
Death of persons above 90	2	1	3

MARRIED,—At Salem, Dec. 1st, by the Rev. Mr. Willson, Hall Curtis, late Surgeon of the Mass. 2d Reg't of Heavy Artillery, to Miss Alice Dodge Silsbee, daughter of John H. Silsbee, Esq., of Salem.

DIED,—At New London, Conn., 12th inst., Winslow Lewis Perkins, M.D.—Killed, at the Battle of Cedar Creek, Oct. 19th, 1864, Col. Joseph Thoburn, lately commanding the 1st Division in the army of West Virginia. Col. Thoburn, before the rebellion, was a practising physician in Wheeling, Va.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 24th, 94. Males, 56—Females, 38.—Accident, 3—apoplexy, 2—disease of the brain, 3—inflammation of the brain, 1—bronchitis, 2—burns, 1—cancer, 1—cholera infantum, 1—consumption, 15—convulsions, 3—croup, 2—diarrhœa, 1—diphtheria, 3—dropsy, 1—dropsy of the brain, 3—erysipelas, 1—bilious fever, 1—scarlet fever, 4—typhoid fever, 3—disease of the heart, 1—infantile disease, 1—disease of the kidneys, 2—inflammation of the knee-joint, 1—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 14—marasmus, 2—cerebro-spinal meningitis, 1—old age, 2—ovarian disease, 1—peritonitis, 1—puerperal disease, 1—rheumatism, 1—smallpox, 4—disease of the stomach, 1—unknown, 6—whooping cough, 1.

Under 5 years of age, 36—between 5 and 20 years, 8—between 20 and 40 years, 27—between 40 and 60 years, 11—above 60 years, 12. Born in the United States, 60—Ireland, 21—other places, 13.

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CLIMATOLOGY OF CONSUMPTION.—No. II.

By Augustus A. Gould, M.D.

[Read before the Boston Society for Medical Improvement, and communicated for the Boston Medical and Surgical Journal.]

In the number of the Boston Medical and Surgical Journal for Sept. 10, 1863, I gave a table, derived from the United States Census of 1860, showing the comparative proportion of deaths from consumption and from fevers in each of the States, with some speculations as to the proximate causes of those diseases, and the differences in their distribution. It was shown that the mortality for consumption regularly decreases from North to South, and is only about one tenth part as frequent a cause of death in Georgia as in Maine; and again, that with the great class of fevers the reverse is the case, so that if the deaths from the two causes were added together for each of the States, their sums would be nearly equal, and constitute nearly an equal proportion of all the deaths occurring in each State. In other words, these two classes of disease are in a great measure supplementary to each other. I have since analyzed the census for 1850 in the same way, and find the figures given for 1860 fully corroborated.

I allude to this subject again, in consequence of a paper in the London *Medical Times and Gazette* for 1863, on "Popular Errors in regard to Diseases," in which the author has undertaken to disabuse the public as well as the professional mind, in regard to consumption. The following are some of the notions he presents and authoritatively disposes of.

"Ague and consumption have long been regarded as antagonistic diseases, so much so that residence in an aguish district is sometimes recommended as a preventive and arrestive of consumption. Dr. Peacock some time ago showed that nothing can be farther from the truth than such a notion."

Our table, on the contrary, confirms the popular notion, and shows most unmistakably that these diseases abhor each other, so to speak;

and that nearly in the proportion that one is present the other is absent. By this it is not meant that one of the diseases has any power to extinguish the other, but that the surroundings which favor the one seem not to be promotive of the other; or that the causes of one are so rife and fatal as to absorb the pabulum for the other. It may be said that by the term "ague" it was not meant to include all miasmatic fevers; but if "fever and ague" alone is meant, it is none the less evident from the table that the well-known aguish districts are those which are most exempt from consumption, and *vice versâ.*

"But the popular error about consumption perhaps the most common and most mischievous, is the supposed influence of climate upon this disease. The popular belief is, that consumption is more rife and more rapidly fatal in northern than in southern latitudes, and therefore the first desideratum for a consumptive northerner is either residence under a southern sky, or, if this cannot be had, at any rate a cautious avoidance of the supposed influence of his own climate. The idea of a necessary connection between consumption and a cold, wet, and variable climate is quite at variance with the facts of common experience, as well as with the results of statistical research. * * * * Again, statistical researches, of late years, prove beyond question that consumption, so far from being peculiar to cold, wet and variable climates, exists in all latitudes, and that, as a rule, the farther we go south the more rife the disease and rapidly fatal its progress."

If this be so, the laws for the development of disease, or the modes of elaborating statistics must differ more in Europe and America than would be readily admitted. That consumption is peculiar to, if this means exclusively limited to, cold, wet and variable climates, no one will contend; or, that the farther we go south the more *rapidly* fatal its progress, we would not dispute, but think there are good reasons for coinciding with such a view, on account of the debilitating nature of a hot climate. But that it is more rife the farther we go south, and that it is not directly connected with wet and cold, we cannot admit. The statistics on which the author bases his assertion are neither given nor referred to; but it is not likely that any table can throw so much light on this point as the one referred to, showing, as it does, the uniform results of two decennial registrations, each of them made simultaneously throughout all the States of this vast region, embracing every variety of climate and surface, and made under uniform instructions. However imperfect may have been the diagnosis, or the operations of the marshals, the errors would be alike distributed throughout, and no probable errors would essentially vitiate the great result, that, in the United States at least, whatever may be the combination of causes, deaths from consumption increase constantly and uniformly from south to north, until it victimizes nearly ten at the north to one at the south. We cannot believe that, were the census of all Europe to be taken at once and under uniform instructions, as has been done in this country, the result would be essentially different.

"People see and hear of more deaths from consumption among the young and middle-aged than among the old, and therefore infer that consumption is a disease almost exclusively of early and middle life. * * * * The Registrar-General's Report teaches us that, in proportion to the number of old men living, consumption makes just as great havoc among them as it does among the young and middled-aged."

The prevailing impression is undoubtedly as above stated. Taking the returns as they stand, it would appear not only that deaths from consumption are *as* common in old age in proportion to the numbers living, but very much *more numerous* than in early and middle life. Still, every pathologist knows that *tubercular* disease, after fifty years of age, is exceedingly rare as a cause of death, and in an octogenarian is perhaps never found. In the first period, too, a large proportion of deaths ascribed to consumption should be charged to common diseases of nutrition; so that could our returns under this head be reduced to strictly tubercular disease, there is little doubt that the majority of deaths from this cause would appear between the ages of twenty and forty years.

ADVISORY MEDICAL BOARDS FOR INSANE ASYLUMS.

[Communicated for the Boston Medical and Surgical Journal.]

SOME remarks under the above title, and over the signature of *, were submitted (in this JOURNAL of Nov. 10th) as a review, in part, of an article published in the number for Oct. 13th, entitled "Medical Management of Insane Women." The party reviewed again appears (in the number of Nov. 24th) with what he probably considers a reply. But as the critic in his excitement confines himself mostly to what was *not* and what *might have been* said, it is unnecessary to follow him through all his nine pages of miscellaneous assertions and undignified allusions—alike a waste of time and valuable Journal space. But a few additional thoughts, it is hoped, will not be considered as uncalled for or out of place.

The incoherence of our critic appears on the slightest examination. He "appeals to the *experience* of every candid practitioner," in support of his theories, and then says, "these points have never been estimated, if indeed suspected," &c. Why appeal to the experience of medical men on points they have not examined or suspected? It may not be thought a recent discovery that physical disease often exists with and aggravates mental alienation, and, health returning, the mind improves; but that any amount of physical suffering is sufficient, without predisposition, to *produce* insanity, has never been demonstrated.

But the misrepresentations of our critic are of the most serious character. In his bundle of alleged contradictions appear several distinct statements devised for the occasion. By reckless and extravagant expressions he seeks to obscure the real objections, simply and fairly stated, to the practical working of a separate board of medical advisors for our hospitals for insane. But no candid reader will be deceived as to the true significance of the subject, or the disabled condition of the writer who resorts to such means to sustain his discomfited arguments.

A recapitulation of the position assumed may be concisely stated. There seem to be many disadvantages connected with such a permanent board of advisors as recommended, and no real advantage over existing arrangements; and it was attempted to show the uselessness of such a board for all practical purposes, without giving to it such powers and privileges as would make it an evil and a nuisance to the real superintendent, if he were a competent medical man. But another objection to such a board as contemplated may be mentioned, more serious than any before urged. If it were known by the female patients in our hospitals that such special advisors were appointed, every bearing-down pain in the loins, and every feeling of weariness in the back, &c.—sensations arising from functional disturbances peculiar to the sex—would be dwelt upon and exaggerated by minds already unbalanced and morbid, and there would be no peace for the patients until the knight of the speculum had been summoned, a search for the imaginary demon instituted, and an attempt made to drag him from his hidden retreat. Managers of insane asylums will find existing delusions sufficiently numerous to make them hesitate in creating, unnecessarily, a cause for new ones so prolific.

Comment is made by our critic because the author's name was not published. Was that necessary? It was deposited with the proper parties, and the writer is responsible for the facts and the logic, and not for the inferences drawn from them by others. The little offering was brought modestly to the great pyramid of thought, and there left alone—no vulgar desire existing to see the name at once carved thereon. A simple asterisk marked it as not editorial. But the "little twinkling star" was sought among the fossils and not found. Forthwith the critic seizes his pen and writes—"if not a fossil, an impostor"! He peers curiously, if not insanely, at the signature for the light and reason of the article itself, and, not obtaining definite satisfaction, concludes it is all an "airy nothing," but makes one desperate charge with "the whole panoply of his gorgeous rhetoric" for its annihilation. He had better restrain his temper and extend his observation.

In regard to the late Commissioners in Insanity, defended with so much warmth, no disrespect was intended or expressed. No doubt was raised as to their private worth, and no complaint was made of their public services. The question was merely asked why all the good men and true, experts in the speciality under investigation, were passed by. That those selected were obliged to educate themselves for that particular task at their own expense after their appointment, is admitted, rather unwittingly, by our critic. That one of them escaped the offer of a superintendency of an asylum, not because he was unqualified, after his term of service as commissioner, but because he was not a physician, is too absurd for further notice or demonstration.

Considerable anxiety is expressed in regard to the effect of our article, especially concerning the insults to brother superintendents. If there are any to be found who favor such a board of advisors as recommended, they are not among the writer's acquaintance. They may not endorse all the objections made; but that they do not *all* feel insulted by our views already expressed, evidence is at hand. Some well-known writers in the specialty of insanity, and practically acquainted with the management of hospitals, approve the objections stated. One writes :—" We are all much pleased with your remarks; they express our views completely." And another, deservedly eminent as a practical superintendent: " There is just as much occasion to have an oculist, an aurist, a chiropodist, to the end of the chapter of specialties, attached to our institutions for the insane, as one for that under consideration." And another, not a superintendent, but a physician sound in judgment and of acute observation: " The general practitioner has often to witness and lament the deleterious influence of some specialist in the department named. The minds of a few women in a neighborhood become disturbed with the idea that something is *wrong* about the *womb*. The disease (imaginary) becomes contagious; the delusion extends, and the panic becomes general, till most of the women in the community are made anxious and miserable." All these, brethren of our " own household " and otherwise, will be surprised to learn, by our critic, that they have been insulted and did not know it.

In the last communication of our reviewer it is said: " Little has been undertaken or accomplished for the cure of insane women at our public hospitals." Does he mean to say that superintendents have not discharged, *as cured*, as many women as men? Where are the statistics? Such sweeping declarations, without visible means of support, are neither creditable to the author nor complimentary to living superintendents, and are a stigma upon the hard-earned fame and revered memory of the honored dead. *

ASST. SURG. HOWARD, U.S.A., has prepared a model of a new ambulance, combining many and important advantages and conveniences not possessed by any form of ambulance hitherto in use.

OZŒNA AND STRUMOUS DISEASE TREATED BY MEDICATED INHALATION—A NEW INHALING APPARATUS.

By Charles Warren, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

Mrs. F., aged about 30, of rather delicate organization, but not sickly, applied to me Nov. 2, 1863. She stated that for the last three years she had suffered from an exceedingly offensive discharge from the left nostril. She described the stench as being almost insufferable. She had been treated by several respectable physicians, and had in addition exhausted almost the whole catalogue of nostrums, without receiving any benefit. I commenced the treatment by means of shower syringes, and continued it for nearly four months, throwing through the nostrils, in both directions, the following remedies in weak solution, viz., sulphate of copper, nitrate of silver, sulphuric acid, acid nitrate of mercury and chloride of soda; giving internally sulphate of iron and quinine, and syr. sarsap. comp., with iodide of potassium. This plan of treatment made no perceptible change in the case, and I told her I thought it useless to continue the showering any longer, but would try inhalation if I could invent some way by which she could inhale through the nostrils; thinking by this plan that I might possibly reach the seat of the disease, if I had not already done so. After much experimenting I succeeded in preparing an instrument, and commenced the treatment by causing her to inhale, three times daily, the following:—℞. Iodini, gr. xv.; potassii iodidi, ʒ ss.; ipecacuanhæ, ℈ iv.; conii, ℈ ij.; cimicifugæ, ʒ v.; scillæ, ʒ ij.; ether. sulph., liq. sodæ chlor., aa f ʒ v.; spt. vini rect. et aquæ, Oi. M. The effect was truly magical. At the end of one week she reports, the fœtor has wholly disappeared. Two weeks later, no return of fœtor and the discharge diminished one half. At the end of six weeks both had almost wholly disappeared.

She says to-day, Nov. 30th, in answer to my inquiries, "I have not been troubled any to speak of for the last six months. Two or three times during that interval, when I have taken cold, there has been a slightly increased discharge from one nostril, which subsided as the cold passed off."

Miss H. T., aged 20, of strumous constitution, always delicate, has been failing in health for the last three years; is hoarse, and sometimes partially aphonic; has had several severe attacks of hæmoptysis; cough very distressing, being aggravated by chronic pharyngitis and diseased tonsils. She is feeble, emaciated and anæmic; lower extremities swollen; respiration hurried; pulse frequent; appetite poor. Dulness and tenderness on percussion in right clavicular and subclavicular spaces, involving apparently about one third of the right lung; imperfect expansion of the chest and suppressed respiration over that portion of lung.

The symptoms in this case seemed to indicate phthisis far advanced, but the physical signs did not warrant that conclusion, as I could not discover any particular indications of softening, but the diseased lung was evidently in a state immediately preceding it.

From the whole aspect of this patient, and the fact of her having been treated by a well-educated physician, and having been rapidly declining for the previous six months, I could give little or no encouragement, and had serious doubts whether anything I could do would be of any avail. I however told her that if she could consent to have her tonsils removed I would then decide whether or not I could do anything more for her. She immediately consented, and I removed both tonsils, one of which contained a considerable quantity of a lardaceous matter. She bore the operation well, considering her enfeebled condition; the parts healed kindly, and in one week after the operation she commenced medical inhalation. I gave her iron, recommended a generous diet, and as much exercise in the open air as she could well bear. At the end of two months there was evidently some general improvement. By auscultation at this date, a feeble respiratory murmur was distinctly audible, and the sounds on percussion were more resonant, which fact she distinctly noticed herself. The cough, which had for a long time been very distressing, although somewhat relieved, still continued obstinate. Under this course of treatment she continued to improve, the cough slowly subsided, and by the early part of the next summer had nearly disappeared. She had gained her usual amount of flesh and strength, and in every other way seemed quite well.

Medical inhalation is no new thing. Brought into notice long since, it has been strenuously advocated by some, and combated by others of the profession. No doubt the excessive claims urged for it by those who first introduced it, operated disadvantageously. It was natural to doubt a method which was to cure so many diseases. But apart from this, there can be no dispute that it is, when properly used, a most efficient mode of introducing remedies into the system. The direct and speedy result of the treatment in the case first reported, leaves no room to doubt that it was the local effect of the remedy which caused the improvement in the symptoms. In regard to the second case reported, there may be some doubt as to the relative value of the tonic and the local treatment. Evidently they helped each other.

The point which I wish to present is, the ease and comfort with which the inhalation was performed by means of the apparatus mentioned. It seems the easiest thing in the world to get up an inhaler, but how many attempts have ended in futility. Certainly I could find nothing to suit my purpose, and I was obliged to have resort to my own invention. As will be seen by the cut (see advertisement on last page) it is as simple as it can well be. Compact, portable, adapted both to the nostrils and the mouth, it meets a want long felt, and as such is offered to the profession. This inhaler consists of a bottle or reservoir to contain the liquid to be vaporized, with a cap which is fitted closely on the neck of the bottle. There are two vertical tubes, extending upward from the said cap, and open at their lower ends into the interior of the bottle. There is also a third tube, open at both ends, extending from the cap down into the bottle and nearly to its bottom, through which the air passes in being drawn into the bottle and through the liquid, causing an agitation, during which the vapor is thrown off and drawn into the air passages through the two nostril tubes. These nostril tubes are supplied with an elastic air-tight valve, made of rubber, which, during the act of inhaling, is pressed up against the nostrils by the thumb and index finger of the left hand so as effectually to close them.

ON THE CONDITION OF THE STOMACH AND INTESTINES IN SCARLATINA.

By Samuel Fenwick, M.D., late Lecturer on Pathological Anatomy at the Newcastle-on-Tyne College of Medicine.

The object of this paper is to prove the following propositions:—

1st. That the mucous membrane of the œsophagus, stomach and intestines is inflamed in scarlatina.

2d. That desquamation of the epithelium of these parts takes place.

3d. That notwithstanding the anatomical changes in the mucous membrane of the stomach, the formation of pepsine is not prevented.

4th. That the condition of the skin is similar to the condition of the mucous membrane in scarlatina.

In support of the first proposition, the microscopic examinations of the mucous membranes of the œsophagus, stomach and intestines were detailed in ten cases of death from scarlatina during the first week of illness, and in six cases who died in the second and third week of the fever. The first effects of the scarlatina poison upon the mucous membrane of the stomach were shown to be the congestion of the bloodvessels and the stripping of the epithelium from the tubes and the surface of the organ, and also the softening of the tissues. The tubes are greatly distended by granular and fatty matters, or by small cells intermixed with granules, and in some cases they are lined by a newly-formed membrane. Sometimes no normal cells can be distinguished; in other cases they are present, but are scattered irregularly. After the second or third week the tubes are found less distended than at an earlier period, and whilst their closed ends are still loaded with granular matters, which greatly obscure the gastric cells. These become more evident towards the surface of the mucous membrane. The cells at this period are sometimes very large, sometimes loaded with fat or coated with granules, and seem to have but little adhesion to their basement membrane, as they readily separate from the tubes, but adhere closely to each other. The effects of the inflammation upon the intestines seem, in slighter cases, to consist in the effusion of granular and fatty matters into the mucous membrane; but in more severe cases the tubes of Lieberkühn are obstructed by epithelial cells, whilst extravasations of blood take place in the villi, and these, with the rest of the mucous membrane, are loaded with small cells and granules. In one case the mucous membrane was entirely stripped of villi, excepting a few fragments which still remained, and the enlarged and prominent openings of the follicles of Lieberkühn gave its surface the appearance of a sieve. In some instances in which the pancreas has been examined, evidences of disease presented themselves.

The second proposition was stated to be more difficult of proof, inasmuch as vomiting usually occurs only in the first stage, and the author had no opportunity of examining the vomited matters at this period of the disease. In one case, in which vomiting took place in the third week, fibrinous casts of the stomach tubes were discovered, and inflammation of the mucous membrane was proved to have existed by *post-mortem* examination. The chief reason upon which the opinion that desquamation of the epithelium occurs was founded, was from the microscopic examination of the stomachs of those who had died of this disease. The contents in recent cases consisted of pieces of fine membrane, of cells, and of granules and shreds of membrane. The membranes were of the shape and size of the tubes of the stomach, and were covered with granules and fat. The cells varied from 1-1200th to 1·2200th of an inch, and were usually fringed with fine pieces of membrane. In cases of longer duration the membranes were covered with cells, and were also of the size and shape of the stomach tubes. In order to ascertain if these appearances were trustworthy as evidences of inflammation, the contents of the stomachs of forty-five subjects were examined at the Middlesex Hospital, the condition of the mucous membrane being at the same time noted. In only one were there any fibrinous casts, and it was in a case of acute gastritis. In eighteen there were only separate cells, chiefly of the columnar form, and in none of these was there any inflammatory action. In eight cases casts of the upper parts of the tubes were plentiful, composed only of healthy conical cells, and in all the mucous membrane was in a natural condition. In eighteen there were either plugs formed of cells and granules from the secreting parts of the tubes, or the casts of conical cells were overlaid with granular matters, and in all of these the stomach was more or less inflamed. Two cases of gastritis, unconnected with scarlatina, were also quoted as examples of the forms in which casts of the stomach tubes appeared in vomited matters during life, and the author stated that he had detected casts of the stomach tubes in matters vomited by persons affected with gastritis connected with diseased kidneys, with inflammatory dyspepsia, and other forms of inflammation of the gastric mucous membrane. It was urged that if casts of the gastric tubes can be discovered during life in cases of gastritis, and if in scarlatina this condition exists, and casts have been found in the stomach after death, there is every probability that desquamation of the epithelium takes place in this organ, as it does in the skin and kidneys.

In support of the third proposition, the results of the following experiments were given in three cases of scarlatina:—Ten grains of hard boiled white of egg were digested at a temperature of 90° for twelve hours in an infusion of the mucous membrane, to which three per cent. of hydrochloric acid had been previously added. The average loss of albumen was three grains and two thirds. Similar experiments performed with the stomachs of eleven males who died of various diseases at the same hospital gave an average loss of four grains; so that there had been scarcely any diminution of pepsine produced by the fever. As a contrast to this were the results of similar experiments upon four cases who died of typhus fever. In two of these the albumen had gained three grains of weight by imbibition, and was not at all softened; whilst in the other two it was softened, and one had lost only half a grain, the other one grain and a half in weight. But as the activity of the digestion must depend not only upon the relative amount of pepsine, but also upon the bulk of the mucous membrane, this was also attempted to be estimated. The average weight of the mucous membrane of the stomachs of ten males dying of various diseases at the Middlesex Hospital was eighteen drachms, the weight of two recent cases of scarlatina was eighteen and sixteen drachms (the latter being in a boy), whilst it only amounted to fifteen drachms in one who died in the third week of illness. In four cases of typhoid fever the average weight of the mucous membrane only reached eleven drachms.

Under the fourth proposition it was stated that the skin had only been examined microscopically in three cases. In the first, in which the paient died after a few days' illness, the only morbid appearance in the cutis was an occasional minute extravasation of blood in the neighborhood of the sudoriferous ducts. The rete mucosum was greatly thickened, and numerous round cells with large nuclei were everywhere visible, intermixed with the natural cells. The basement membranes of the sweat-glands were thickened, and the epithelium lining them was so much increased that in most cases it obstructed their channels. In some of the sweat-glands the coils of which they were composed were loaded with coagulated blood, and were greatly and irregularly distended. In the other recent case the appearances were similar, excepting that the external layers of the cuticle were stained with blood in minute patches, and the sweat-ducts were also reddened; but there were no extravasations of blood either in the glands or cutis. In some of the ducts the epithelium was detached from the basement membranes. In the case of a man who died during the third week the sudoriferous tubes were still choked up, but in the glands the epithelium seemed in many places to be torn away, leaving the basement membranes bare, or only covered by ragged particles. The cutis was in a natural condition.

The author stated that although he had, in accordance with the usual custom, described the appearances of the skin and mucous membranes as the results of inflammation, yet that certain considerations suggested the idea that the term when so used was perhaps misapplied. In scarlatina, we find that in each part the morbid condition is mostly confined, in the first instance, to the basement membranes, and consists in the formation of layers of new cells, which, in the skin, are transformed into cuticle of natural appearance, and in the stomach contain pepsine. If future researches should prove that a similar condition occurs in the kidneys and other parts, it will be necessary to look upon the structural changes produced as resulting from increased physiological rather than from pathological action; and that the primary effect of the scarlatina poison is suddenly and violently to stimulate the natural cell-growth of the various secreting organs.

Dr. Wilson Fox said that he had listened with much pleasure to Dr. Fenwick's very able paper. It had possessed an especial interest for him, inasmuch as Dr. Fenwick's observations on scarlatina confirmed those which he had himself communicated to the Society in 1858, on the condition of the stomach in a variety of acute diseases, including variola, typhoid and puerperal fevers, pneumonia, peri- and endo-carditis, cholera and many others, in which he had found the stomach in a condition very closely resembling that described by Dr. Fenwick, and which, after Prof. Virchow, he had designated as one of acute catarrh, the mucous membrane being hyperæmic, swollen, and cloudy-looking, and covered with very tenacious mucus. This condition he (Dr. Fox) had always found associated with a granular condition of the epithelial cells, which were shed with great facility both from the surface of the membrane and from the interior of the tubes; and were found in great numbers, and often enlarged and presenting multiple nuclei, in the tough mucus covering the surface. Since he had made these observations he had been in the habit of regarding the furred condition of the tongue in acute diseases as an index of the same irritative production of epithelium through the gastric intestinal tract. He had also at the same time been able to point out, on anatomical grounds, that chronic affections of the stomach were frequently associated with chronic affections of other organs. On some points of detail Dr. Fox said that his observations differed from those of Dr. Fenwick. He (Dr. Fox) had not examined with the microscope the stomachs of patients dying from scarlatina, but the appearances which these presented to the naked eye corresponded so closely with those to which he had alluded that he spoke on them with more confidence than he should otherwise feel inclined to do. He still thought, as he had pointed out in his original paper, that the granular matter which Dr. Fenwick described as occurring free in the tubes, was really contained in the interior of epithelial cells, and that it was only in the severest cases of acute gastritis in which the cells became at once broken down, that the granular matter was found free. With regard to the casts of tubes described by Dr. Fenwick, he (Dr. Fox), not having examined the stomachs of scarlatina patients, could not make any positive observations, but he had never found any in the cases of other diseases which he had mentioned. He had, however, often observed appearances in the mucus having a most deceptive resemblance to casts, from the manner in which the epithelial cells were agglutinated by the tough mucus. He did not think that these casts, if they did occur in the stomach, could be of a fibrinous nature, any more than the first epithelial desquamations from the kidney in the early stages of Bright's disease possessed that character; nor was he of opinion that the membrana limitans of the gland separated with the epithelium. He believed that when the membrana limitans (when it existed) was destroyed or injured, the power of reproducing epithelium was impaired or lost. Epithelium often separated in continuous masses from mucous surfaces and from the interior of glands. Such desquamation was not only exceedingly common under conditions of irritation, but was also, under some circumstances, a physiological act. It had been noted long ago by Mr. Goodsir, during digestion, and many recent observations on this subject were contained in Virchow's Archiv. He (Dr. Fox) was of opinion that Dr. Fenwick's observation, though very valuable as evidencing the participation of the stomach and intestines in the consequences of the scarlatina poison, did not show anything specific in that organ, or peculiar to the diseases in question.

Dr. Webster had listened with great gratification to the paper, especially as it confirmed what he had observed as to the employment of remedies in scarlet fever. It gave a great additional value to the minute researches of the author that they had a practical bearing in treatment. Dr. Webster then related instances in which the internal administration of irritating remedies, especially purgatives, did harm. He referred also to the bad effect of diet which was administered to some children in scarlet fever to tempt the appetite; and lastly, alluded to the good effects of sponging the skin with tepid vinegar and water.

Dr. Murchison said that he had examined the stomach in twenty cases of scarlet fever, and found, on the whole, similar appearances to those described by the author; but he agreed with Dr. Fox that the granules were in the interior of the epithelial cells. He had not seen any casts. He thought, however, that the author had called attention to an important complication; but he (Dr. Murchison) could not agree that it was of universal occurrence, as he had examined the stomach in several cases of scarlet fever, and had found it quite healthy; and, on the other hand, he had found changes like those in scarlet fever in the stomach of those who had died of other diseases.

Dr. Fenwick said the question was one of experience, and continued examination would no doubt settle the question. In every case that he had examined during four years he had found the changes he had described. In some cases of scarlet fever the skin was not affected, and yet it was still called scarlet fever, and just so in a few the stomach might escape. Still we should in a large number find evidence of inflammation of the stomach. The paper was chiefly to draw attention to the subject. In reply to Dr. Fox, he said that he had made the sections vertical with a double-bladed knife, and examined them with a low power and by help of a parabolic condenser. He had found casts best in children who had died a few days after the disease began; but in other cases he had not found them, and sometimes he had found only plugs, as described by Dr. Fox. These plugs, he had no doubt, were the result of inflammatory action.—*Proceedings of Royal Med. and Chirurg. Society*, in *London Lancet*.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 5, 1865.

Physical Education in Schools.—In a recent article on our Boston schools we called the attention of the members of our profession at home to the system of over-study which has become so grave an evil in their administration. Knowing how powerful the influence of the family physician is in the household, and how largely our profession is represented in the School Committee, we expressed the belief that much might be done by ourselves privately and officially to break up a practice which so seriously threatens the future health of our inhabitants. That its cause and remedy were not to be looked for in the home from which the child is sent, but lay with the School Committee itself, we have always maintained, and are happy to see that those who have the best opportunities of impartial judgment hold the same opinion. In the last report of the Superintendent of the Public Schools we find the following admirable remarks in relation to the grammar schools. The public knows that the entire management of its schools, of both teachers and pupils, is in the hands of the School Committee, and that this body is wholly answerable for the evils thus faithfully exposed.

"But while these schools are justly entitled to high commendation for their general excellence, it must be admitted that they are not in all respects what they might be; that there are faults and imperfections, in some of them at least, which demand attention. I shall now indicate one particular wherein there seems to be need of improvement. I refer to what is called the "high-pressure system," which appears to me to be the most prominent evil. I am fully convinced that, in some of these schools, the pupils are overworked—that they are overworked to such an extent as to constitute an evil of great magnitude. This evil exists in both the upper and lower classes, but it is more fully developed, and more injurious in its effects in the highest divisions, where the pupils are competing for medals. It is found in the schools for boys as well as in the schools for girls, although it is more general and more harmful in the latter. The baneful effects of this mistaken system are not limited to a few individual pupils, who come to school in delicate health, and without the ordinary power of endurance. They are destructive to the health of scores and hundreds who commence their school life with sound and vigorous bodies. This hurtful system operates in three ways to the injury of pupils—physically, by preventing bodily exercise and recreation; mentally, by exacting too constant and too severe intellectual application; and morally, by unnecessarily tempting children to deceive in order to escape the consequences of failures in lessons. Is it the design of Providence that all the brightest girls should have the most feeble and puny physical powers? But this absurd theory could be established as a scientific fact, by an examination of our schools, if it is only admitted that the children have not been stunted by the processes of education. Did my limits permit, I could produce evidence enough to satisfy any candid mind that over-tasking is a very great evil in our schools—that it is an evil which an intelligent community ought not to permit.

"'But how does it happen,' I am often asked, 'that parents do not complain of this evil more frequently and more loudly, if it is what you represent it to be?' To my mind the answer is obvious and sufficient. In the first place there are complaints. Not a few come to my ears from sources which deserve the highest credit and confidence. But the reasons why they are not more are various. Many parents are not aware of the evils which their children suffer. Many are unwise enough to suppose that children cannot be kept too close to their books, that the harder they can be made to study the more capable and successful they will be in after life. A great many keep silent because they are ambitious that their children should receive the distinction of a diploma or a medal, and they fear that any interference with their lessons will defeat this darling object. A great many more are constrained to abstain from complaints by the entreaties of their children, who fear that any complaints about their tasks will cause them to be degraded in rank, which, in their estimation, is a mortification terrible to think of. These are some of the reasons for the apparent acquiescence of parents in this unwise system.

"I shall not undertake to say who are to blame for the existence of this evil. Probably the blame should be shared by several parties. There are certainly some members of the Committee, and some teachers, who see and lament it, and would remedy it if they could. I think there are teachers who put on the 'high pressure,' not because they think it for the good of their pupils, but because they feel compelled to do so for fear of being considered inefficient, if their pupils do not come up as high, on examination, as the pupils of certain other schools."

"But there is another way in which nearly all the pernicious effects of which I have spoken might be prevented. It consists in simply obeying the Regulations, in letter and *spirit*. In the first place the provision that prohibits out of school lessons for girls, should be sacredly regarded. This provision is now violated both directly and indirectly. In some schools it is put to the vote of the children to decide whether they will consent to get lessons out of school. Is this right? Is it proper? Of course the pupils will vote as their teachers wish them to. The provision is violated indirectly by permitting or requiring pupils to come before school hours, and remain after school hours, for the purpose of learning their lessons. The rule in regard to recess is violated. Pupils are permitted or required to study at recess, instead of occupying the time prescribed in exercise and relaxation and recreation. I would not be understood as saying that these rules are universally disregarded. Nor do I think they are generally disregarded. Still, they are violated to an extent which requires attention.

"I regret to say that the provision in Section 21 of Chapter VIII. of the Regulations is not generally complied with. This provision requires gymnastic exercises each half day, and a liberal construction of its language would permit such exercises *twice* each session; and if it were faithfully carried out in all the departments of every school, it would operate very powerfully both in preventing and in counteracting the effects of the 'high-pressure' system."

We were pleased to see that at its last session the Committee seemed to be somewhat awakened to the importance of a matter it has so long overlooked, and is about to enforce a thorough system of daily gymnastics and military drill in all the schools. Of the importance of this element in the education of our youth of both sexes we have already spoken at length, and it will undoubtedly prove to be a remedy in part for the evils of over-study. Prevention, however, is always better than cure, and we trust that the Committee will not rest satisfied with this slight attention to the latter.

With the public itself must rest the final responsibility of appointing the proper persons to this body. It has not, however, done its duty in this respect. Persons have been nominated and elected within a few years, who were no more fit to advise in the education of our children than a Blackfoot Indian, and who were placed on the ticket merely on political grounds. It would be quite as proper to appoint our teachers upon the same system, and we trust that some other method may soon be adopted by which the nomination of the School Committee may come from some higher quarter than a ward-room committee.

DIABETES SUCCESSFULLY TREATED BY BRAN. *Messrs. Editors*,—I was somewhat annoyed at seeing in a recent number of the JOURNAL (page 402) a case reported by me under the following caption, "Case of Diabetes successfully treated by Bran." The caption was not mine, and the case was reported simply as one of diabetes. I did not suppose that the bran bread had any but the most indirect influence in the cure, nor is there anything in the words of the report to lead to such a supposition. In fact, the patient was not directed to use bran, but that coarse, more or less branny flour called "shorts," and not having the shorts at hand he used the bran. The only benefit I can conceive of in the use of either of them, or in the Camplin bread, is that they exclude the use of large quantities of common flour bread in which large amounts of starch are found.

I would not have alluded to this subject had not some persons already caught at the bran as an important remedy; and because I would not be guilty of gravely setting forth a trivial concomitant as a specific or effective remedy. We have too much of this already. In this instance, the caption might have been, with equal propriety, "diabetes successfully treated by ginger and water," or by "paracentesis for varicocele," which happened to have been done while the patient was under treatment. The improvement was no doubt mainly owing to the animal diet and to rest. Aug. A. Gould.

Died,—In Roxbury, Dec. 17th, 1864, Dr. John Lawrence Fox, aged 54 years—surgeon U.S.N.

Dr. Fox was a native of this city, and a son of the late Ebenezer Fox, of Hollis, N. H. He was prepared for college at our Latin school, while under the successful direction of Mr. Ames, and graduated at Amherst in the class of 1831. He pursued a course of medical study at Philadelphia, and with the late Dr. A. L. Peirson, of this city, and received a medical degree at Harvard in 1835. After an interval of two years, devoted in part to classical teaching, but chiefly to studies connected with his profession, he passed a most honorable examination and received the appointment of Assistant Surgeon in the U. S. Navy—his commission bearing the date of Sept. 6, 1837. Since his appointment—a period of about twenty-seven years—his services have been in almost constant requisition—thirteen years and eleven months having been passed in sea service, and eight years in the charge of the Naval Hospitals at Chelsea and Brooklyn, and as an assistant in the Medical Bureau at Washington.

His earliest cruise of importance was with Capt. Wilkes in the exploring expedition, and during the four and a half years to which it was protracted he discharged his arduous duties with signal ability, and secured a reputation and popularity which told much to his advantage in procuring desirable appointments in his subsequent cruises. Early in the spring of the present year he was appointed Fleet Surgeon of the North Atlantic Blockading Squadron, then rendezvousing in the neighborhood of Fortress Monroe. Under a pressure of responsibility, second to none but that of the Admiral himself, involving the general supervision of the medical staff of the whole fleet—the largest and most formidable, perhaps, that history has recorded—he w orked on most indefatigably, till his naturally robust constitution yielded under the burden, and he reluctantly consented to a temporary withdrawal from the scene of his labors. He reached his home at Roxbury about a fortnight since in a state of great prostration, and failed gradually until death set a seal to his earthly record. His devotion to the service of his country in this hour of her stern trial will be the brightest item of that record—to tear himself from this service cost him the severest struggle of his life. "Let me die at my post," was the last aspiration of his patriotic soul, as he was almost literally forced from his ship by the more considerate hand of fraternal affection.

His brother officers and the generous tars who have known him only to love and respect him, will long cherish the memory of his worth and kindness, and not a few of our citizens who have met with him abroad, on the sea and in foreign ports, will recall his manly form, his frank and open manner, and his generous, whole-souled disposition.—*Salem Register*, Dec. 22.

Condensed Milk.—The great value of this article, and its importance to the Union army, by whom enormous amounts of it are used, will commend the following account of its mode of preparation at the milk factory at Wassaic, Duchess Co., N. Y. (condensed from the *New York Tribune)*, to the attention of our readers.

The company have this year contracts with somewhat over fifty farmers for the daily delivery of 10,000 quarts of milk, six days in the week, at three cents a quart. It is required to be carefully strained and thoroughly cooled upon the farm by ice or cold spring water, some hours before it is hauled to the factory, because it will injure in close cans if carried while it contains any animal heat. There are two receiving vats outside of the factory, under sheds, where the wagoners drive up and place the cans upon platforms. Here the first process in the purification commences. Each can is examined by the taster, who has acquired the same degree of skill that custom-house liquor-tasters have, and which enables him to determine whether the milk is sweet, or has been "extended" at the spring. Samples are often taken and set away in basins, properly marked, to prove the quality of each dairy. It is found that some farms naturally yield milk of a superior quality to others. The cows are generally what is called "native stock." Those which give the greatest number of quarts of milk in a year are the most valuable.

Besides the use of steam as a motor and heater, it is the great agent of cleanliness, which appears to be considered next to godliness in this establishment. It is a rule of this factory that everything that is used for milk once must be washed with steam and water before it is used again. The least particle of milk adhering to a vessel, and becoming sour, contaminates the next mess. It is on this account that they prefer to wash the farmers' cans, as it is impossible to do it as well with cold or hot water as it is done by steam. Milk sent to the city in cans by farmers is often injured by the neglect of those whose duty it is to keep the cans perfectly clean and sweet.

As soon as the cans are emptied they are, one after another, turned bottom up on a stand and a strong jet of steam let on for a minute, and this is followed by a jet of water, which washes away every particle of adhering milk, and all the washings flow away into the creek.

The milk being strained and cooled at the farm, and brought in under cover of blankets and buffalo skins, is received at an average temperature, in summer, of 56° to 58°, and therefore it is a very unusual thing to find a can that has any taint of change. Owing to the thorough cleaning of the cans, it is impossible for the milk to become soured by the cause that often affects milk sent to the city—that is, souring of the cans after they are emptied.

Ice, as well as steam, being a necessity of the work, there is a large ice-house connected with the factory; and lately a complete cheese-manufacturing room has been added, so that, in case of any sudden decrease of the demand for condensed milk, as happened when the sutlers were ordered back from the front, the milk contracted for can all be received and converted into cheese.

How the Milk is Condensed.—We will start from the platform where the cans are received from the farmer, and take the reader step by step through the whole process.

If the cans "pass muster," they are immediately emptied through a fine cloth or strainer into the receiving vat, which holds a thousand quarts. From that the milk flows through a pipe, and is drawn into brass pails which hold fifty quarts each. These stand in a flat tub capable of holding sixteen of the pails at once, which is filled with water that is heated by a coil of steam pipe. Here the milk is heated to 190° to 195°, and in this first process of the work of condensing lies the whole secret of success. This was the discovery of Mr. Borden. He was not the originator of condensed milk. It had been thought of and processes patented before the date of his patent, but all had failed, because the albumen of the milk, if boiled in open kettles, burnt upon the bottom, and if *in vacuo*, coated the pipes and vessel, preventing perfect condensation, and, if heated too high, giving an unpleasant odor to the condensed milk. When thus cooked upon the inside of the condenser, the albumen became an insoluble cement, which required great labor to remove, and which, if not removed, would spoil the next charge.

In this water bath, in these open pails, the albumen is coagulated, without separation from the watery portion of the milk, and a little portion that adheres to the pail is almost instantly removed by placing the pail bottom up over a steam jet, instantly followed by a strong water jet, in the same way that the farmers' cans are so perfectly cleansed. Until this plan was adopted, the work of cleaning off the coagulated albumen was very laborious. Now it is almost instantaneous.

This first process requires but a few minutes, and two men stand ready to hook a tackle to the pails as fast as the contents reach the proper temperature, and hoist them out of the bath and empty them through a fine brass wire gauze sieve into what is termed a "steam well." This is a copper vessel shaped like an egg, standing on end, with about one fourth of the upper end cut off. This holds about seven hundred and fifty quarts—six and a quarter barrels. This well is made with a steam jacket over the lower end, so that the milk, which is already heated almost to the boiling point, is soon brought to that degree, and is then ready to go to the condenser.

This first boiling in the open kettle appears to be another of the requisites in the preparation for the final operation, as it gets rid of something in the milk that tends to make it foam in the boiler; and if there is any defect in the condition of the milk, it is exhibited here in this open kettle, and the deposit of albumen that takes place during the first boiling is easily seen and cleaned off between the changes. There are two of these steam wells, with their accompanying water baths and receiving platforms. From these the milk is taken by what is generally termed suction, through tinned iron pipes, to the floor above, where there are three condensers, or vacuum pans. These in form are somewhat like the steam well, the egg shape being complete

—being four by five feet in diameter, and holding one thousand quarts. In the upper part on one side, there is a window, through which strong sunlight, or lamplight, is reflected to the bottom, and opposite this there is an eye-glass, though which all the movements of the milk are seen, and by that means the boiling is regulated. There is also a man-hole, through which a man enters after each charge is withdrawn, and scrubs the copper bright enough to almost see his face in it. The lid of the man-hole being screwed on, the pan is ready to commence receiving a charge. The first operation is to start a powerful double-action air-pump, which exhausts the air in the vacuum pan until the gauge shows twenty to twenty-five inches.

The cock in the pipe connected with the steam-well is now opened, and the milk rushes up to fill the vacuum. This pipe, by the by, is inserted into the milk from the top, and does not extend quite to the bottom, so that if any sedimentary matter has accumulated there from the boiling, it is not taken up to the condenser. As soon as the first charge is drawn up, more milk is prepared ready in the well for the next demand. The steam is now let on, heating the coil of pipe inside, and the steam jacket outside of the condenser, the pumps being kept in continual operation, and the milk closely observed by the intelligent Yankee girl (one of the "mudsills"), one of whom has charge of each pan, and prides herself in keeping it and all around as neat as she does her person, and all are faultless. In a few minutes she observes the thermometer indicates 190°, and that the milk in vacuo is boiling rapidly. In open air at this elevation it would require 210°, and could not have eighty per cent of the water it contains removed, as is the case in the condenser.

As the boiling goes on, the milk continues to flow in, until 3,200 quarts have been taken up. Then the cock of the supply pipe is closed, and from this time the most watchful care of the attendant is required to keep the heat regular, and the pumps working perfectly.

The pumps stand upon the lower floor, where a stream of cold water flows upon the air chamber, and condenses the steam vapor drawn from the boiling milk into water, which is discharged into a stream constantly flowing through the building. This condensed vapor constantly emits that peculiar odor that we perceive in milk warm from the cow, or during the operation of boiling, and which contains the germ of putrefaction.

When the charge of 3,200 quarts shows by the guage that it has been reduced to 800 quarts, it is ready for the final operation of purification. The steam is shut off, and its place filled with cold water, the singular effect of which is to instantly increase the heat of the milk to a very high degree. This is called superheating, and the effect is to throw off all the remaining odor, through the discharge of the pumps. This often has such a fetid, sickening smell, that it pervades the atmosphere all around, and affords one of the most convincing proofs of the value of the process that discharges such a substance from our daily food.

From the time the milk is received from the wagons until it is finished in the condenser, about three and a half hours are required for all the operations.

How the Preserved Milk is made, and what it is for.—First, it is for all purposes for which milk is desirable where fresh milk cannot be obtained, such as in the camps of our army and on board ships, or in any other situation where it is necessary to preserve milk for future use, longer than that already described would keep sweet. The "preserved milk" will keep an indefinite length of time. Its period has not yet been determined.

Now, what preserves it? Sugar, simply. Nothing is added in substance or manufacture, but pure, double refined sugar, which has this curious effect upon the milk: it causes it to part with a greater portion of its water, so that a pound of milk and sugar combined actually occupies less space than a pound of milk without sugar. This result, though familiar to the chemist, is curious to the reader who may not be familiar with the fact that a given measure of two substances may be combined and then occupy only the space previously occupied by one.

But to return to the process of manufacturing. The sugar is emptied from the barrels into reservoirs, and boiling milk poured upon it till all dissolved, and then it is again strained, making the third time here, and fourth one, counting the straining on the farm. The sugared milk is then drawn up into the vacuum pans, and the process completed as described. The cans of this milk, when cooled, are taken from the ice-bath to the packing room, and emptied into others set upon stands and provided with stop-cocks, like those called molasses gates, through which the milk, which is of the consistence of thick molasses, is drawn into tin cans which hold exactly one pound each. When filled, their covers, which have about two inches diameter, are put in place, and three drops of solder melted upon the joint and around the edge. This work has generated heat enough to expel the slight amount of air under the lid, through a small hole in its centre, which is now closed by a little drop of solder.—*Med. & Surg. Reporter.*

Any physician who has had an obstinate case of ozœna to treat will appreciate, we think, Dr. Warren's ingenious inhaler, described in this week's Journal and figured on the cover. If its use accomplishes all that it promises, it will supply a desideratum which has long been urgently felt, and will lay both the profession and the community under lasting obligations to the inventor.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, December 31st, 1864.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	42	52	94
Ave. mortality of corresponding weeks for ten years, 1853—1863,	42.2	41.7	83.9
Average corrected to increased population	00	00	91.88
Death of persons above 90	0	0	0

Deaths in Boston for the week ending Saturday noon, Dec. 31st, 94. Males, 42—Females, 52.—Abscess, 1—accident, 4—disease of the bowels, 1—inflammation of the bowels, 3—congestion of the brain, 1—disease of the brain, 4—bronchitis, 3—cholera infantum, 2—consumption, 22—convulsions, 4—croup, 4—diphtheria, 2—dropsy, 2—dropsy of the brain, 1—erysipelas, 1—scarlet fever, 4—disease of the heart, 2—insanity, 1—lithiasis, 1—inflammation of the lungs, 8—marasmus, 1—measles, 1—old age, 3—puerperal disease, 1—rheumatism, 1—scalded, 1—scrofula, 1—smallpox, 4—suicide, 1—syphilis, 1—trachealis, 1—unknown, 7.

Under 5 years of age, 33—between 5 and 20 years, 8—between 20 and 40 years, 27—between 40 and 60 years, 9—above 60 years, 17. Born in the United States, 58—Ireland, 28—other places, 7.

THE

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CASES ILLUSTRATIVE OF THE DISEASES OF WOMEN.

By Horatio Robinson Storer, M.D., of Boston, Surgeon to the New England Hospital for Women.

[Read before the Suffolk District Medical Society, Dec. 31, 1864, and communicated for the Boston Medical and Surgical Journal.—Continued from vol. lxx., p. 200.]

I am frequently asked if antero-posterior displacements of the uterus, of marked degree, and of several months or years standing, can be permanently relieved, so that the patient may safely go without any external or internal support. I have now seen many cases illustrative of this result, like the following.

Case VII.—*Anteversion following Miscarriage; Cure.*—Mrs. S., English by birth, the wife of an officer in the Confederate army, consulted me for the first time on April 14th, 1863. She had been married three years, and had enjoyed excellent health until her miscarriage in the preceding August, at Havana, during an attack of yellow fever; it being her first pregnancy and advanced five months. From this time she dated her present disease. Her menstruation has since been normal in quantity and quality, length of interval and time of continuance, but attended with considerable suffering during the first of the discharge. Constant pain at sacrum, right groin, and in region of that hip and back of thigh. Frequent necessity of passing the water, but no urethral irritation. No leucorrhœa. Bowels moved daily without medicine or enemata. Appetite and nights good.

This patient had consulted an eminent surgeon, to whom she had not mentioned the fact of her miscarriage or of her incontinence of urine. In the absence of all other direct evidence of any uterine lesion, this gentleman had seen no reason to propose a vaginal examination, and had treated the case as one of incipient hip disease, by blisters, iodine, &c. &c., without producing any relief.

Upon examination, I found the cervix hypertrophied and indurated, the uterus decidedly anteverted, but without flexion, the os consequently thrown back upon the posterior vaginal wall, its surface roughened to the touch, its orifice nearly imperforate, a small sound entering with great difficulty. The cavity of the uterus was in length nearly an inch over the standard, as is often the case after the occurrence of labor or an abortion.

The uterus was replaced, one of Hodge's closed levers introduced, of large aperture to receive the hypertrophied cervix; no other local application made. Citrate of iron and quinine to be taken daily.

April 18th.—Less pain. The instrument has not been displaced. The uterine tissue evidently softer and of more healthy consistence, the uterus showing much less disposition to displacement; on removal of the pessary, one of Meigs's watch-spring rings was substituted. Application of the hammer cautery to the sciatic region.

May 5th.—Improving; blister from nitrate of silver over right groin.

9th.—The patient suffering from an attack of bilious diarrhœa, the ring was removed, so as to avoid its pressure upon the rectum. It was replaced again on the 18th, removed once more on the 11th of June, replaced for the first week of July, and on the 8th taken away finally, the patient being now well. The lady called at my office several times subsequently, reporting that there had been not the slightest return of any of the symptoms; the uterus remaining, upon examination, perfectly in place and in a healthy condition.

This case is illustrative of certain important points.

1. The necessity of closely cross-examining female patients, as to past history and symptoms.

2. The propriety and advantage of physical examination, on suspicion merely of local disease—the proper rule being, with married women, never to prescribe without such an examination when there is any reason whatever to suspect the existence of pelvic disease. With unmarried women, on the other hand, vaginal examinations ought not to be made, unless directly indicated, until general medication has been resorted to without effect.

3. The symptomatology of displacements, which, it is my firm conviction, are of very much more common occurrence than is generally supposed, even by experts, if they are accustomed in diagnosis to depend mainly upon the speculum. This remark applies more especially to flexions, where the cervix is frequently in its natural position and enters readily the opening of the tube, while in versions its engagement is usually effected with more difficulty. I am satisfied, also, that the occurrence of displacements forward is proportionately more frequent than has been allowed by writers, and have upon my note-books very many cases in proof of this supposition. The statement has been made by various writers that displacement may exist to an extreme degree without in any way affecting the health of a patient. In reply, it is merely necessary to state that cases are very rare where direct and very evident disturbance is not to be de-

tected as its result. If such is not yet present, it by no means follows that it will not sooner or later become manifest, and in its absence there is almost always to be found some reflex symptom, no matter how obscure, of a neuralgic character or otherwise, of sufficient influence to affect the general health, and therefore of sufficient importance to be cured by removing its cause.

4. The causation of displacements, and

5. The rational treatment of displacements. Upon the theory by which we account for the origin of aberrance in the uterine axis as compared with those of the pelvis, depends in great measure the character of the treatment resorted to. If, with Henry Bennet, we are to consider that whatever sign of the presence of metritic or cervical hypertrophy or engorgement may be discovered, depends primarily upon idiopathic inflammation of the os and cervix, which of itself is able secondarily to cause displacement, or even flexion forwards or backwards, or to either side, the treatment must of course be mainly, as it is often solely, directed to the os and cervix uteri, either by the application of leeches, by scarification, or by the milder or stronger caustics; a method of practice that, as is well known, is of frequent resort by many skilful practitioners in this neighborhood. If, on the other hand, as can be proved to occur not unfrequently, the displacement primarily begins with the deviation itself, how different should be the course pursued. It is by removing the cause that, as in the case now reported, we shall most certainly and effectually overcome the effect. There can be little doubt that in slight efforts of the body generally, or of the muscles of the abdominal parietes, or in distension of the rectum, or the passage of scybalous masses, in the tenesmus arising from hæmorrhoids, in the extremes of fulness and emptiness to which the female bladder is, by the inconveniences of social life, confessedly so prone, and in the shock of falls, of horseback rides, or of sexual intercourse, occurring, as these may all do, at times of congestion and increased weight of the uterine fundus, as for instance, near or at the catamenial period, and after an accouchement or a miscarriage, we have a much more rational explanation of the causation and character of displacements.

It can hardly be urged, with reference to the case now reported, that the displacement existed previously to the abortion, or that it was the predisposing cause of the accident, all symptoms of disease having presented themselves after its occurrence.

In treatment, it will be found that even in extreme cases, unless adhesions have taken place between the uterus and any neighboring organ, though this may at times be overcome, we can usually, by replacing the womb and keeping it in position, cure the diseased condition of the os and cervix without any direct application thereto. In a few exceptional cases, where, for instance, the lesion has been of very long standing, or where an impetuous husband is constantly endeavoring to assist in the treatment, it may be of advantage to hasten a healthy condition by such applications as potassa fusa or the actual cautery, the latter of which I myself prefer.

There are many cases of displacement, especially of flexion, in which it is asserted that the sound cannot be made to enter, and where, indeed, there will be found some difficulty, even by practised hands. Many cases of this character, previously diagnosticated as instances of tumors impinging on the rectum or bladder, have been sent to me for treatment, some of which I may report at a future time. The sound may here often be made to enter the supposed tumor by firm pressure upon the latter by a finger in the vagina, thereby lifting the mass and straightening the uterine axis, a mode of procedure that seems hardly to have been mentioned by obstetrical writers. The obstruction to the passage of the sound here pointed out is to be distinguished from another of not infrequent occurrence in displacements, where the point of the instrument becomes caught in one of the little lacunæ of the cervical canal, just as in instances of stricture of the male urethra. In these cases, the indication is of course to change the curve of the instrument, or to use one with a larger or smaller point as may be required. And this cause of obstruction is again not to be confounded with others that may exist, as the presence of a cervical or other polypus, of spasmodic stricture at the upper extremity of the cervix, or pressure by an intramural enlargement.

Replacement having been effected, there is much choice as to the means of retaining the uterus in position. To the operative procedure by slitting up the cervix, anteriorly or posteriorly as the case may be, now so frequently and skilfully performed by Dr. Emmet, of New York, the accomplished successor of Dr. Sims at the Woman's Hospital, I am as yet hardly prepared to yield my full assent; nor, on the other hand, can I endorse the views proposed by Dr. A. K. Gardner, at the last meeting of the American Medical Association, in accordance with which the use of pessaries, even for temporary support, would be entirely discarded.

In the employment of pessaries, not blindly or indiscriminately and for permanent use, but temporarily and with reference to the exact lesion, as is done with splints for a broken limb, I have much confidence; but the instrument, of whatever form, should suit the exact requirements of the case and should perfectly fit the patient. Upon these points, to the importance of which I have repeatedly publicly alluded, there is still a general inattention or indifference. My own preference is generally for the various forms of Hodge's lever, to which I freely confess I was formerly opposed. They accomplish far more than could theoretically have been expected of them; the material of which they are made is unirritating and slightly elastic, and, when fitting, their presence is not noticed by the patient. An erroneous impression prevails that when the blunt points of the open form of the instrument have, as is often the case, formed for themselves little fossæ in which they rest, ulceration must necessarily have occurred. Nothing, however, can be farther from the truth, if the instrument is well fitting and yet easily moved by the finger; and though undoubtedly there may be instances of this lesion from the use of instruments made of too narrow and attenuated rods, with which the market is now flooded, yet with points of a proper thickness the accident referred to can hardly occur. With their aid many cases may be cured which would otherwise be hopeless. In some obstinate displacements of comparatively rare occurrence, or where, adhesions existing, it is thought advisable to break them down, it is necessary to obtain a fixed and external leverage; for these cases I still prefer my own modification of Simpson's double instrument, as originally proposed in this JOURNAL, eight years ago.* There is a double instrument now made of hard rubber by Tiemann, of New York, which also replaces the womb by a concealed lever, but the mechanism is somewhat complex, and in practice I have found it get out of order. At times I have succeeded excellently well with the intra-uterine stem, attached to double or triple vaginal wings, expanding after insertion.

In some instances of displacement there exists primarily, or secondarily, a local hypertrophy or congestion of the uterine wall, falling short of distinct or permanent tumor. Here the cure may often be hastened by introducing, in conjunction with support by a lever, the bead caustic within the cavity of the uterus, not as an application to the cervical canal, but to the localized disease of the fundus. The cure of decided displacement by applications merely to the os and cervix, is as little likely to be accomplished as by endeavoring to attain the same end through exciting adhesive inflammation between the external surface of the cervix and the vaginal wall. In several instances that have been sent to me, I have now had to perform dissections to counteract the evil results from this latter operation, which, in view of the frequency of these results, I cannot too strongly condemn.

All forms of abdominal bandage, for the treatment of displacements of the uterus, save in only one or two exceptional cases, I am inclined to disapprove. The exceptions to which I refer are those instances of anteversion where pregnancy exists, or where the uterine cavity is of abnormal length, as in sub-involution, or where the displacement is occasioned by complication with an abdominal tumor. In anteversion where the uterus is wholly within the pelvis, in retroversion, or in any degree whatever of procidentia, complicated or not with vaginal cystocele or rectocele, an abdominal bandage almost necessarily aggravates the displacement. In the few cases in which I have allowed that its use may be of advantage, it must be carefully fitted to the patient's form, by "gathering," &c., so as to lift what it contains upward, rather than to press backward and downward; as in either of these cases it forces down the intestines into the pelvic cavity.

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* This JOURNAL, November, 1856, page 288, with wood-cut.

There are many more suggestions that might be made regarding the treatment of displacements. In what I have said I have answered some of the questions most frequently put to me.

Case VIII.—*Anteversion extreme, and probably of long standing; Cure.*—Mrs. G., of Ellsworth, Me., was sent to me on Oct. 5th, 1863, by Dr. Buckminster Brown, with the message that she had been treated by several physicians without relief, for so-called "spinal irritation," but that he suspected the case to be one of uterine origin. The lady was still menstruating, though forty-nine years of age, but the catamenia had become irregular, and lately profuse. She had but once been pregnant, twenty-four years ago. The chief complaint was of sacral pain. Upon examination, the uterus was found thrown forward, the cervix enlarged and jammed against the sacrum so firmly that it was with great difficulty I could get my finger around it and bring it down. Once, however, replaced, it was retained *in situ* with ease, with the effect of greatly relieving the pain. The os was roughened and nodulated. A double lever was introduced, and no other application made. The patient was then allowed to visit New York. Upon her return, the womb was still found in place. On the 22d Oct., the charcoal cautery was applied to the cervix, and, as she desired to return home as soon as possible, Meigs's ring was introduced, to keep the vaginal walls from exerting an irritating action upon the os until that should have recovered its healthy condition. There was no disposition towards a recurrence of the displacement, and I have reason to believe that the relief has been permanent.

It will have been noticed that in this case, as in No. VII. preceding, I replaced the lever pessary as soon as the uterus was able to retain itself in its usual position, by the watch-spring ring. This is not done for the purpose of preventing a subsequent displacement, for the ring is almost wholly inefficient in guarding against this, as it is in relieving it when it has occurred. Its employment is to prevent contact of the vaginal walls with the secondarily sore and irritable os, just as the hoop is used to keep bed-clothes from an injured limb. By the simple use of the ring, a perfect restoration of an inflamed cervix, or an abraded os, dependent or not upon a displacement, to a condition of health, may be very frequently effected without the necessity of employing the speculum or any direct local application whatever.*

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* In view of the fact, tolerably well known by physicians in this vicinity, that I have uniformly protested against the unnecessarily frequent use of the speculum and nitrate of silver so generally considered indispensable by those professing an acquaintance with uterine disease, one may well be amused at the especially ill-fitting epithet applied to me in the last week's Journal, by the gentleman who has undertaken to criticize my proposal of Advisory Boards at Insane Hospitals, for the cases of female patients. The term "knight of the speculum" seems hardly applicable in this instance, except on the principle of *lucus a non lucendo*, very much as seems to have been the case with the part taken by my doughty op-

It is in attention to these details, comparatively trivial and unimportant as they may seem to some, that one of the great secrets of success in gynæcal practice will be found to lie, for it is of common and unexceptional cases that the great bulk of those presenting themselves consist.

In the preceding cases, the displacement, as so often does really happen, might have been mistaken for a tumor; the two following will instance the possibility of an error directly the reverse.

Case IX.—*Anteversion from Interstitial Fibrous Tumor.*—Jane C. consulted me on April 15th, 1863, being sent to me by Dr. Hasket Derby. This patient had been under the charge of oculists for many years, her disease utterly baffling all explanation and treatment. Dr. Derby, wisely surmising that there might be present some other and primary derangement, ascertained the existence of chronic leucorrhœa, and from this attributed to an uterine cause the reflex lesion.

She stated to me that the leucorrhœa was profuse and of seven years' standing, which was also the period that the ocular disease had existed, that the menses were normal in quality, but lasted seven days, that the bowels were regular and her general health tolerably good, with the exception of lassitude and the usual symptoms of anæmia. The patient was unmarried, and alleged that there had never been local disturbance induced either by intercourse or masturbation, though she had suffered severely from hæmorrhoids, the irritation of which I have often found causative of the habit just alluded to.* Astringent pessaries of ointment were advised to the vagina.

April 16th.—The leucorrhœa still existing, I had no hesitation in making a vaginal examination, inasmuch as the patient had been thoroughly treated constitutionally previous to her coming under my charge. I found present a well-marked hymen, despite the relaxed condition of the vaginal walls, consequent upon and partly occasioning the leucorrhœal flux. A pendulous and flabby polypus, the size of an olive, emerged from within the os uteri. This was removed by torsion, and its base touched with nitrate of silver. The hymen was so persistent that it was difficult to make firm pressure anteriorly to the cervix, but there appeared to be little or no displacement of the uterine body. Upon the 24th of April I applied iodine

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ponent, whose zeal in this controversy and the arguments that he has advanced alike seem based upon an utter want of knowledge as to the real principles which should govern the treatment of insane women.

* There can be no doubt that in many instances the habit of masturbation in women is occasioned and kept up by reflex irritation from disorders of an adjacent organ, as from hæmorrhoids, ascarides, dysmenorrhœa, &c. &c. This causation I have frequently observed in my studies of insane women, and I am convinced that the habit among the sane, so far from being properly considered a vice merely, is very often, in its commencement at least, but a very natural effort at relieving the suffering from pruritus. That it may be often pursued simply for the gratification of a lustful desire, I do not of course deny; but even in many of these cases it is to be treated as essentially a physical disease, local treatment being found infinitely more efficacious than the camisole or any amount of moral suasion.

to the os, and on the 8th of May a solution of nitrate of silver. On the 30th of May the leucorrhœa was almost gone, the os and cervix were in a very healthy condition, but I noticed for the first time that the womb was tending abnormally forward; for this I introduced the smallest sized closed lever pessary. She then went to visit friends at Leominster, returning to me on the 25th of June. The anteversion was more marked than before, and I substituted for the closed instrument an open lever, or horse-shoe. At this time there was no tumor to be discovered by the most careful examination, and the identity of the mass touched by the finger, with the uterine fundus, was proved by its entrance and free movement by the uterine sound. A week later, on July 1st, she entered the Woman's Hospital by my advice.

She here passed under the care of Dr. Zakrzewska, who called my attention not long after to the development of an apparently fibroid and somewhat lateral outgrowth from the anterior uterine wall. This tumor, at first distinguishable with the greatest difficulty, has increased until it is now of the size of a hen's egg, apparently tending to become pediculated externally, as its motion coincidently with the uterus is not so distinct as it was six months ago. As it has become developed, the general health of the patient has improved, her eyes give her only occasional trouble, and then but slightly in comparison with what formerly existed. About a year since it was found that another polypus had emerged from the cervix, in character and size like that which I had previously removed, and this was easily extirpated. She is now able to do light nursery work, and from time to time reports herself for examination. On the 26th Nov. ult., the hæmorrhoids to which I have already alluded still giving her some little trouble, they were removed by the wire ecraseur.

In the above case it is hardly to be supposed that the cure of the cervical disease, by the removal of the polypus first formed, had anything to do with the establishment or rather development of the tumor of the fundus, more especially as a recurrence of the original affection seemed to produce no appreciable effect upon the extent of the displacement or the progress of the tumor. It is therefore evident that the anteversion was not occasioned in direct sequence by the cervical disease, and in this connection the case is interesting in its comparison with those previously related.

Case X.—*Tumor of doubtful Character anterior to the Uterus; Recovery.*—Mrs. H., of New Bedford, was sent to me on May 4th last, by Dr. Abbe, of that city, reporting that though married several years, she had but once been pregnant, and then had accidentally miscarried at eight months. Since a year after this occurrence, she had been unable to retain her water, which was turbid and came from her in sudden gushes, deluging her clothes and not allowing a moment for withdrawal to a more convenient place for such relief.

She was emaciated, and her general health had evidently been affected by her disease. Upon examination, the uterus was found much enlarged, this being, however, chiefly confined to its walls, as shown by the sound, and the cervix and body of the organ were tender to the touch; a distinct tumor, the size of the fist, rounded, its outline well defined, being situated anteriorly and a little to the right. This mass was but slightly movable either by the sound within the uterus or by the catheter within the bladder, and was apparently unconnected with either of those organs. Through the abdominal wall it could not so easily be distinguished as by the vagina, nor could it so readily be moved. Buchu was ordered, and ointment pessaries of belladonna.

June 2d.—A slight improvement was noticed. A pill of cubebs was added to the medicine already ordered, and the cautery of prepared charcoal applied to the cervix. The tumor, as before, was firm and unyielding in character, without trace of fluctuation. The urine, under the microscope, was profusely charged with pus-cells.

Aug. 31st.—General health improving. For the medicines hitherto taken, there was substituted an infusion of the common red clover.

Sept. 3d.—Dr. Storer, Sen., saw the patient with me in consultation, and agreed with me that the diagnosis was a doubtful one, the tumor still remaining as at first noted. Daily opiate injections were about this time ordered for the bladder. On Sept. 22d, the tumor appeared to be a very little smaller than previously, but still hard and unyielding. The urine much clearer, and retained with comparative ease. On Oct. 18th the tumor was detected with difficulty, and on the 26th it had entirely disappeared. From that time there has been no tendency to its return, the urine is healthy and perfectly under control, the patient has gained many pounds in flesh, is very much stronger, and considers herself as well.

Now it is difficult to offer a plausible explanation as to the character of the tumor that was here present. Its resistance to the touch and the absence of all perceptible fluctuation would seem to remove it from the two alternatives that would most naturally have suggested themselves, viz., pelvic abscess or an ovarian cyst spontaneously discharging themselves through the bladder; suppositions which were rendered the more unlikely from the fact that there had never been any previous symptoms of either of these diseases, and that the purulence of the urine, which had long been present, became absent long before the tumor was materially diminished in size, and its discharge was at no time increased in quantity, either immediately or within a short time, by firm pressure upon the mass. There was at no time any tendency to spasmodic action of the recti or other abdominal muscles.

I was several times upon the point of using the exploring needle, either by the vagina or through the abdominal parietes, but was deter-red by my wish to allay the irritability of the bladder previous to any operation. For this indication, I have found the infusion of trifolium of use in other cases, though, so far as I am aware, its employment for this special purpose is original with myself. As is well known, it has lately been used to some extent in Great Britain as an antispasmodic in whooping cough and asthma. The patient had just made her arrangements to enter the Woman's Hospital for an operation, when it was found that the tumor was commencing to disappear.

Case XI.—*Polypus Uteri, probably Cancerous; necessity of subsequently removing its Base; Recovery.*—Mrs. L. S., of Townsend, aged 57, ceased to menstruate about ten years ago. Her father and two uncles are reported to have died of cancer, as also several great uncles and aunts on the paternal side.

In 1861–2 she had occasional uterine hæmorrhage of moderate character, attended with more or less pelvic pain and uneasiness. In the winter and spring of 1863 she had some treatment from her family physician. She thought she had prolapsus of the uterus, but was averse to examination, though she said that sometimes the womb came out between the labia. In June, 1863, Dr. Hitchcock, of Fitchburg, was called to see her, and made the first vaginal examination. He found a tumor pendulous in the vagina, about 2½ inches long by 1½ in thickness, nodulated, firm, and somewhat resembling an enlarged pancreatic gland. This had its origin from within the neck of the uterus, by a pretty broad and firm base. About an inch from the os the tumor had a neck, not more than one fourth its general diameter. As it was not sensitive nor very vascular, it was twisted off by forceps, very little hæmorrhage following. Not long afterwards, under the use of astringent injections, the protruding stump grew smooth and hard, and felt very much like an acorn trying to emerge from its involucre. During the autumn of 1863, there was a good deal of soreness in the pelvis and some uterine pain. For various reasons, not necessary to name, no other surgical means were adopted till March, 1864, when, after dilating the os for two weeks with graduated sponge tents, Dr. H. cut off the tumor with an oval-pointed knife, and immediately applied a saturated solution of zinc. Within two weeks he made three applications of the zinc, passing it at least two inches within the os, so as to reach the whole of the base of the tumor. Two months afterwards the whole wound had healed, and all purulent or morbid uterine and vaginal flow had ceased. From this time onward she improved in health, flesh and spirits, with scarcely any vestige of pain or discomfort. Within six months she was several times examined, the os and neck of the uterus being found perfectly normal and healthy.

On the 28th of Nov. ult., Mrs. S. died suddenly of apoplexy. Upon *post-mortem* examination, from three to four ounces of blood were found in the ventricles and base of the brain. The uterus and appendages have been very kindly sent to me by Dr. Hitchcock, and are found in a perfectly healthy condition; the fundus may be a little too massive, but the os and neck present no trace of the former disease.*

It is comparatively seldom that a polypus, when thoroughly removed, unless of cancerous nature, shows any disposition to return—the instances where it seems to do so being generally in consequence of a similar growth in the neighborhood of the former, but not from its exact base; in this instance, however, from the known carefulness of the physician in charge, there can be no doubt of the fact.

Not having had an opportunity of examining the morbid mass at the time of its removal, I am unable to speak of its ultimate structure. From the previous family history of the patient, there was great reason to expect the development of malignant disease, and it is impossible to resist the impression that the tumor removed must have been of this character. It differed very materially from the fungous growth presenting itself in so-called cauliflower excrescence, where the disease, when removed, often returns with such frightful rapidity, and seems to have resembled more closely that very rare affection, the "recurrent polypus" of late writers, two or three cases of which I have now seen.

An examination of the specimen shows how completely the disease was removed, and the fact that it had not returned, during the eight months that preceded the patient's death, bears witness to the judgment shown by Dr. Hitchcock in performing the operation.

ORGANIC SUBSTANCES ARTIFICIALLY FORMED FROM ALBUMEN.

By Alfred H. Smee, F.C.S.

In a former paper which I had the honor to submit to the Royal Society, I showed that fibrin was formed by the passage of oxygen through albumen, provided a temperature of 98° F. was maintained. It was then observed that a slightly acid state of the albumen, or the absence of the alkaline salts, was found to be most favorable to its formation. I noticed, also, that ammonia had little effect in preventing the formation of fibrin, but after the lapse of a short time caused it to swell to such a degree that its microscopic characters could no longer be determined. It was observed that albumen acted on by gastric juice and passed through a membrane, still had the capacity to form fibrin in small amount.

Since the publication of that paper, I have conducted the following experiments in addition to those before mentioned. I submitted some of the fluid drawn off from a spina bifida to the action of oxygen and heat in the ordinary manner; after the lapse of a few hours it yielded a substance which, under the microscope, presented all the characters of fibrin.

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* The specimen was exhibited at the meeting of the Suffolk District Medical Society, and is now at the College Museum.

I tried to obtain fibrin from the urine in two cases in which it was highly albuminous. The urine was so loaded with albumen that it became almost solid by heat. I never have been able to transform this variety of albumen into fibrin, although the experiment was tried in many ways. I expect that on further investigation it will be found that the albumen found in urine (in most cases at least) is a substance not capable of further development.

The next experiment which I have to describe is to my mind one of the most beautiful exemplifications of the artificial formation of organic bodies under physical laws, producing results similar to those which we observe under certain circumstances in disease, the changes being produced by the action of a gas on a second body separated by a membrane, and having to traverse it before the chemical changes can be effected.

I passed a current of oxygen gas through a small portion of perfectly clean intestine, with the peritoneal coat attached. The intestine was placed in an albuminous fluid at a temperature of 98° F.; at the end of twenty-four hours I found the intestine completely invested with minute fibrinous outgrowths, similar to those seen on the intestines of persons who have died at the earliest stage of peritonitis.

It is worth noticing that although these fibrinous outgrowths take place when the peritoneum of the intestine remains, yet if this coat be stripped off they take place to a very limited extent. In many cases no outgrowths appear, even where the conditions of the experiments are equal.

It appears to me that the tendency of fibrin to be deposited on serous membranes, under favorable circumstances, may throw some light on the frequency with which we find the surfaces of serous membranes (for instance, the pericardium) so often coated with fibrinous outgrowths.

If hydrogen is passed through albumen to which a small quantity of potash has been added sufficient to ensure a slight excess of alkali, after the lapse of some time a dense, hard, horny mass will be observed, especially at the point where the hydrogen comes into contact with the albumen; in fact the growth of the substance often clogs the tube to such a degree that the hydrogen is prevented from further passing through it. It also has a tendency to grow upon platinized platinum when placed in the albuminous fluid whilst the current of hydrogen is passing. The time required is, as a rule, about four days; a temperature of 98° F. rather favors its formation, but is not absolutely necessary to its production.

The following are the chief chemical and physical reactions of the substances formed by hydrogen.

It is heavier than albumen, always sinking to the bottom of the vessels. It is hard, tough, semitransparent, homogeneous, and slightly elastic. It swells up in cold water, and dissolves to a limited extent. The extent of its solubility is less the longer the time occupied for its formation. It is more soluble in hot water. Peroxide of hydrogen is not decomposed by it.

The watery solution is not coagulated by boiling; it is, however, precipitated by chlorine. Hydrochloric acid does not form a blue solution with excess of that reagent. Bichloride of mercury and bichloride of platinum, after the lapse of some time, precipitate it. Tannic acid, alcohol, acetate of lead, sulphate of the peroxide of iron, and alum, also precipitate it from its solution. It is turned yellow by nitric acid and heat. It likewise contains a small quantity of sulphur. Chondrin behaves in a similar manner, in its chemical and physical relations, to the substance thus artificially produced, and hence I propose to call it "artificial chondrin."

In carrying out these experiments, I found that a very nice method of obtaining a constant and equal amount of hydrogen gas was by collecting hydrogen formed at the negative pole of a one-cell battery, and passing the hydrogen thus formed directly into the albumen. The amount of hydrogen required was regulated by increasing or diminishing the size of the negative pole.

This form of apparatus will constantly remain a week or more in action without any appreciable alteration in the quantity of hydrogen evolved.

It may be well to describe the construction of the apparatus used. I first take a common precipitating glass, and place in it a few pieces of zinc, with a little mercury to amalgamate it. I then take a tube about one fourth of an inch in diameter, and bent in two places at a right angle; into one end I insert a platinum wire, and this end I place in the glass containing the zinc; the other end I place in the vessel containing the albuminous fluid. Dilute sulphuric acid is then added to the zinc. When contact takes place between the platinum wire and the zinc, a constant stream of hydrogen is given off from the platinum wire. The amount of hydrogen required can be regulated by making a larger or smaller surface of the platinum come in contact with the zinc. The amount of oxygen which is carried over is very limited, provided a tube is used of one fourth of an inch in diameter; but when a tube of one and one fourth inch is used, a quantity might pass sufficient to interfere with the experiment.

The amount of oxygen at times thus carried over when the large tube is used is so great that a change in the products may take place, and fibrin may be formed in the place of the chondrin, provided the albumen is not over alkaline.

As fibrin was formed by oxygen, and this new substance analogous to chondrin by hydrogen, it occurred to me that these two substances might be formed simultaneously by a simple-cell voltaic arrangement. For this purpose I took a tube with one end closed by parchment paper, or sometimes by animal membrane, filled it with albumen which had been made slightly acid by acetic acid, and inserted it into a small vessel containing albumen, to which a small quantity of potash or soda had been added. I then connected the two fluids by means of a platinum wire, so that one side might become a positive and the other a negative pole. Considerable action took place after the lapse of some time, when, upon examination, I found the albumen in the tube was changed, not into the fibrillated fibrin, but into a granular material. The other pole, or rather the alkaline albumen, was changed into a substance which behaved with various reagents in different ways. In some cases it was a tough, ropy and viscid substance, which was coagulated in water by a solution of acetate of lead, was insoluble in acids and in alcohol, and very slightly soluble in alkali. At other times I have noticed a substance formed having very much the appearance of the expectoration of bronchitis; and at other times the dense hard substance analogous to chondrin in its behavior with reagents was formed.

The various states of the material into which albumen is converted appear to be influenced by the nature of the alkali employed and by the relative size of the negative pole. The temperature should be as nearly as possible constant during the time the experiment is being conducted. The amount of the surface of membrane interposed appears to have very little influence over the products. When soda was the alkali employed, the viscid and frothy mucus-like product was more frequently obtained.

The amount of water present appears to have a very decided influence on the product formed. When the viscid and frothy material is produced, it appears to form quicker than the hard and dense chondrin. The temperature of 98° F. appears to favor the production of the chondrinous material; but I must admit I have sometimes made all the varieties, the viscid, the frothy, and also the chondrin, at much lower temperatures.

In one case I succeeded after many experiments in obtaining from the acid pole, by keeping it at a temperature of 98° F., fibrin of the fibrillated form, but the greater portion of the albumen at this pole was converted into the granular form. The alkaline pole formed pretty constantly the dense, hard, artificial chondrin.

When hydrogen was passed through serum, after the lapse of a day or two a tough elastic product was obtained.

In experiments tried by passing hydrogen through albumen greatly diluted with water, I found, after the lapse of a few days, a flocculent deposit very similar in appearance to the deposit of mucus which often takes place when urine is allowed to stand a short time. This point, however, requires further investigation. I tried also the effect of passing hydrogen through a portion of intestine inserted into an albuminous fluid. I have not as yet been able to form either the dense, hard or viscid frothy substance by this method. I repeated the experiment for the formation of fibrin from albumen, by decomposing the water of its composition by electricity. I must admit this is the most difficult, troublesome and unsatisfactory of all the methods I have employed. I find that the great tendency of the poles to form different substances on them, and the great rapidity with which they grow together, lead, without the greatest care, to the belief that two different substances, differing only in density, are formed at one and the same pole, so intimately blended are they together. Thus I was led to believe at first sight that a dense hard substance was formed at the oxygen end, and not until I had repeated the experiment many times did I discover that the substance belonged to the hydrogen and not to the oxygen pole, and had grown across from one pole to the other.

I have obtained on several occasions fibrin and chondrin at the same time, by conducting hydrogen and oxygen derived by the decomposition of water by voltaic electricity through separate tubes. The oxygen passed into slightly acid albumen formed fibrin; the hydrogen passed into alkaline albumen formed either the chondrin or else the frothy and viscid material. The temperature was kept up at 98° F. in these experiments. On one occasion, however, I happened accidentally to reverse the current (that is to say, the hydrogen was passed into the acid, and the oxygen into the alkaline albumen), when no chondrin or fibrin was formed.

The following conclusions I have arrived at after the study of the influence which oxygen and hydrogen gases exert upon albumen when submitted to their action separately at a temperature of 98° F., the normal temperature of the living body. Albumen under the action of oxygen forms, after the lapse of a longer or shorter period, fibrin. The fibrin thus artificially produced is of three distinct varieties, viz., 1st, the granular form; 2d, a form allied to lymph incapable of being unravelled into fibrils; lastly, the true fibrillated fibrin. The law which appears to regulate the state into which the albumen is converted, as far as my observation has gone, is one of molecular aggregation, similar to the electric deposit of metals, as the slower the fibrin is formed the more organized is it in substance.

I have observed that when fibrin is rapidly formed it is almost always produced in the granular state; this is particularly the case with fibrin formed from albumen by the decomposition of the water of its composition by voltaic means.

Lymph I consider to be imperfectly formed fibrin, more highly developed than the preceding or granular form. It is possible for this artificially formed lymph, under favorable circumstances, to assume a more organized appearance.

I have no doubt that the fibrinous outgrowths on the intestine would have become larger and more developed if the experiment had been carried on for a sufficient length of time. In fact almost all the fibrin formed round a platinum wire inserted into albumen is at first covered by outgrowths of a soft structure. These outgrowths, at the earliest period of their formation, do not, under the microscope, present any appearance of fibrils. After the lapse of some time they appear to undergo condensation, and then to organize to such an extent that it would be difficult at first sight to determine whether the substance might not be a portion of fibrous tissue.

The alkalies, with the exception of ammonia, prevent entirely the formation of fibrin. Ammonia, although it does not retard its formation, dissolves it after the lapse of a short time. The acids and absence of alkaline salts favor its formation. The opposite, however, is the case with the hydrogen products, as an alkaline state favors their production.

The action of hydrogen on albumen, as far as my investigations have as yet proceeded, forms substances analogous to chondrin and mucin. I believe that the organic substances, chondrin and mucin, products formed in a living organism, are very nearly allied to one another, if not varieties of the same substance, differing only in their mode of aggregation and stages of development, and the amount of water in their composition.

Of the exact mode in which hydrogen acts on albumen we are at present ignorant. I have noticed that in some experiments sometimes one, sometimes the other product was obtained, even when the same influences were apparently acting on experiments conducted at the same time.

Considering the important physiological part that fibrin, chondrin and mucin play in the living body, the production artificially of substances analogous in their behavior with reagents to those products formed in a living organism will, I trust, be taken as a sufficient excuse for submitting to the Royal Society a paper so obviously deficient in many parts, but which, nevertheless, it would require a vast amount of both time and labor to carry one step further.—*Proceedings of the Royal Society.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 12, 1865.

Advertisements by Physicians.—By this title we do not, of course, refer to the quack advertisements which have become a chronic nuisance in our daily papers, and which, so long as they are paid for, we must resign ourselves to the sight of, we suppose, until the millennium—but to the professional notices of regular physicians which they may see fit to address to the medical profession or the community through the medium of the press. The time has been when any such advertisement, except perhaps that of a change of residence, was looked upon by most physicians as unprofessional and as bringing the advertiser close to the border of the wide domain of quackery. It is worth our while to consider whether there is justice in this wide-sweeping condemnation, and whether there are any circumstances at the present day which justify a departure from the usage of former times.

The first consideration which strikes us is, that at the present time the study and practice of specialties in our profession is more extensively adopted than ever before. We do not propose now to discuss the wisdom or the advantages of such a course, but take it for granted as generally accepted that the individual departments of medical science which have thus occupied the undivided attention of a crowd of zealous devotees have been elucidated and developed to a degree never before known in medical history. It certainly is important, therefore, for the medical profession and for the public at large to know who those physicians are who have determined to occupy a restricted field of labor, and what are the special subjects to which they confine their attention. No more ready means occurs to us of making such a decision publicly known than through the medium of a modest advertisement in a medical periodical. So presented it is addressed almost exclusively to medical readers, and the advertiser hardly lays himself open to the charge of mercenary motives. No physician in general practice can expect at the present day to keep up his knowledge to the highest standard of progress in the diagnosis and treatment of diseases of the eye, for instance, and the advertisement of one who restricts himself to the treatment of this class of diseases tells him where he may send his obscure or doubtful cases for relief. The relief is two-fold, for the physician and for the patient, and the result is a positive public benefit. It should be observed, however, that a specialist who thus gives public notice of his calling, is bound in honor to confine himself in the main to the field he has chosen to occupy. When a man advertises that "with general practice," &c., he pays particular attention to such or such a class of affections, he is plainly looking out for the interests of his pocket above all others, and means to say, "I am great enough to do all that other physicians do, and so much besides." There is a point of honor in this matter which physicians cannot be too jealous about. Advertisements in any form are liable to be quoted in excuse for those which are purely quackish. Thus an unscrupulous enthusiast may advertise that he always cures incurable diseases. Or a man anxious to impress the public with his acquirements, to which he has no real claim, may refer, in the daily papers, to his recent return from European hospitals, leading the unsuspecting reader to suppose that he is surcharged with all the newest ideas of the profession abroad, and must of course be an age in advance of the common herd of doctors, whose observations and studies have been limited to the narrow horizon of home—the fact being that his whole experience in European hospitals, if any at all, is measured by the short stay in a European port of the packet to which he was attached as ship's surgeon! Such advertisements as these, we are sorry to say, are no strangers to the inquiring eye in our community, and we can only express the regret that those officers of our local societies, whose duty it is to see that the laws of strict medical ethics are closely adhered to among us, are not yet able to see what is so plain to the profession at large.

It would seem, then, if we judge rightly in this matter, that the simple statement of a specialist, in a medical journal, that he has chosen a particular department of professional labor, should not only not lay him open to animadversion, but is probably to some extent a public advantage. It has not the character of the newspaper puff of a tradesman in any sense, where the advertiser plainly designs to recommend as strongly as possible the wares which he offers for sale. Its publication should be limited, however, to the medical press. Advertisements of such a nature in the daily newspapers savor very strongly of a hankering after the gains which are supposed to reward the enterprising advertiser of the last new nostrum, and are not to be thought of for a moment. The only advertisement in a daily paper which occurs to us as being in keeping with strict professional propriety is that of a change of residence, and even this may be allowed to stand so long sometimes as to present a most unwholesome look. We think it would be well if our Medical Societies were to take up the consideration of this subject with the view to fixing by statute the proper bounds within which the custom of professional advertising should be circumscribed, always supposing, however, that rules made for this purpose should not be allowed to slumber as a dead letter.

Dr. Lucius M. Sargent, Jr., Lt. Col. 1st Mass. Cavalry, was killed, Dec. 9th, 1864, in action, near Bellfield, Va., by a shell which broke the right clavicle and otherwise crushed in the chest, though leaving no noticeable external disfigurement.

Dr. Sargent was born in Boston, Sept. 15th, 1826. His life, not a long one, was unusually varied and full of incident. At school, college, before the mast, as artist, physician, or soldier, he was always among the foremost where expedient, energy, talent, and courage were necessary for success. He had seen much of the world, and knew well both books and men. To whatever he undertook, he gave his whole energy with characteristic devotion. Few of his age were his equals in wit, literature, or science. To great physical strength he added the most delicate touch with the pencil, and the tenderest manipulation of the sick.

After his marriage, in 1847, he fitted up a studio at his residence, and passed much of his time in drawing, painting, and collateral studies. Art-anatomy naturally led to practical anatomy, and thence to medical science in general. Having decided to enter the profession, he made the business of preparation a no half-way matter. His zeal was unbounded and his application unremitted. Nothing was too trivial to escape his rapid observation, nor too difficult to discourage his ardent enthusiasm. His progress was remarkable, and the position he attained unprecedented—so that when he graduated he was already a man of mark, to whom the profession looked in full expectation of greater things in after days. The Hospital created the office of Artist to secure his services; and the Boston Society for Medical Improvement, at the earliest moment allowed by their constitution, elected him a member. He soon became one of the most prominent physicians of the section of the city where he located; and a brilliant future seemed opening before him. But the chief obstacle to his medical career came from a source the last to be suspected by any one not intimately acquainted with his character—extreme tenderheartedness. Fearless of gods and men, the plaintive weakness of a sick child appalled, and its death while under his care completely unnerved him. It was while nearly crushed by an experience of this kind that he obtained the appointment of Surgeon of a three-years regiment, 2d Mass. Vols., hoping that the duties of the service would be more tolerable. But the routine of winter quarters and the surgeon's call, with its array of malingerers, soon became too dull for his irrepressible energies. He accordingly resigned his medical commission, asked for a position in the cavalry, and was appointed Capt. in the 1st Mass. Regt. Subsequently he was in a multitude of skirmishes and actions, and dangerous movements known only to cavalry service; and he rose in course with meritorious conduct to the rank of Lt. Colonel.

At the successful action of Aldie Pass he was wounded in the chest, and left for dead on the field; but the ball fortunately made only a subcutaneous circuit of nearly one third the chest, and he soon recovered to return at once to his command. In his last action he fell at the end of a successful charge, at the head of his column, sword in hand, at the very moment of victory.

Strong-handed yet tender-hearted—impulsive yet tenacious of purpose—utterly without fear yet watchfully cautious—gallantly daring in assault yet undauntedly courageous in deadliest combat—of none of the patriot heroes who have nobly perished in unselfish efforts to save their perilled country are the poet's words more *literally* true:—

> "With knitted brow and lifted blade
> In glory's arms he fell."

Treatment of Pneumonia in Children.—M. Barthez, Physician to the Hopital St. Eugenie, one of the two hospitals of Paris specially devoted to children's diseases, in a memoir to the Academy of Medicine recommends expectancy in the treatment of pneumonia in children. He mentions 212 cases in children from 12 to 15 years of age, which had come under his care during the last seven years, death taking place in only two instances, and in these both lungs were affected. In half the cases no active treatment was adopted, in many others the treatment was insignificant, and in only one-sixth was it active. The disease was found by M. Barthez to continue a shorter time in the former cases than in the latter, and the convalescence was also shorter. Good hygienic precautions only were advised. M. Bouvier, in a report on this memoir, comes to the conclusion that the expectant method in these cases succeeds in hospital practice, but should not be adopted as a rule in town practice.

The inauguration of a statue to the memory of Baron Larrey, Surgeon-in-chief of the armies of the First Empire, was recently celebrated by the Department of the Hautes-Pyrénées, Dr. Jules Cloquet being present as a representative of the Academy of Medicine. The son of Baron Larrey, now at the head of the Army Medical Department, was also present.

The No. of the Philadelphia *Medical and Surgical Reporter* for October 29, just received, announces that issue to be the last previous to the 6th of January inst., when, it is promised, the publication will be resumed with promptness and vigor.

It is announced in the public prints that the property of the Castleton (Vt.) Medical College has been sold, and that the College no longer exists.

The number of deaths in the city of Chicago during the month of November was 242—being 18 less than in the corresponding month of last year. Among the causes, were—consumption, 42; croup, 15; smallpox, 11; inflammation of the bowels, 14. Deaths under 5 years of age, 104.

A hospital is to be organized at Columbus, Ohio, in connection with Starling Medical College, to be placed under the management of the "Sisters of St. Francis," an order whose sole vocation is that of keeping charity hospitals.

Prof. W. W. Dawson, M.D., has resigned the chair of Anatomy and Physiology in the Ohio Medical College.

The 16th Regiment Ohio Vols., lately returned from a three years' service, has numbered, including recruits, 1,191 officers and men. It has travelled by railroad 1,285 miles, by steamboat 3,916 miles, by steamship 1,200 miles, and on foot 1,621 miles. The total number of deaths from all causes, as far as ascertained by the Surgeon, B. B. Brashear, is 251. There were killed in battle and died of their wounds, 2 officers and 60 men. There were 185 deaths from disease, of which 47 occurred with the regiment, the others in hospitals, on furlough, in prisons, &c. The number of wounded who recovered was 188. The most prevalent disease was diarrhœa, and the most fatal typho-malarial or camp fever. On surgeon's certificate of disability, 186 were discharged, and 38 were transferred to the Veteran Reserve Corps. The total number mustered out is 447.

Dr. J. Marion Sims, formerly of Alabama, afterwards of New York, but for the last two years a resident in Paris, has had the Cross of the Legion of Honor conferred on him by the Emperor of the French, in recognition of his eminent services in surgery, and his skill and success in the treatment of uterine diseases.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, January 7th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - - -	50	49	99
Ave. mortality of corresponding weeks for ten years, 1853—1863,	43.8	39.3	83.1
Average corrected to increased population - - - -	00	00	90.88
Death of persons above 90 - - - - - - - -	0	0	0

Married,—In this city, 5th inst., Dr. David L. Ambrose, of West Newbury, to Miss Carrie E. Noyes, of South Hampton, N. H.—At Chelsea, 4th inst., Daniel D. Gilbert, M.D., of Boston, to Miss Amelia A. Stebbins, of Chelsea.—In Haverhill, Ms., Dr. C. S. Kittredge, of New York, to Miss A. M. Chase, of Haverhill.

Died,—At Bath, Me., 2d inst., Grenville W. Gay, M.D., late of this city.

Deaths in Boston for the week ending Saturday noon, Jan. 7th, 99. Males, 50—Females, 49.—Accident, 3—inflammation of the bowels, 2—congestion of the brain, 2—disease of the brain, 4—inflammation of the brain, 1—bronchitis, 3—burns, 1—bilious colic, 1—consumption, 25—convulsions, 2—croup, 4—debility, 1—diarrhœa, 1—dropsy, 2—dropsy of the brain, 3—exhaustion, 1—scarlet fever, 1—typhoid fever, 2—disease of the heart, 2—infantile disease, 2—intemperance, 2—synovitis of the knee, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 9—old age, 1—paralysis, 3—premature birth, 2—scrofula, 2—smallpox, 3—trachealis, 1—unknown, 7—whooping cough, 3.

Under 5 years of age, 36—between 5 and 20 years, 13—between 20 and 40 years, 28—between 40 and 60 years, 13—above 60 years, 9. Born in the United States, 64—Ireland, 22—other places, 13.

THE

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POLYPUS UTERI; ITS DIAGNOSIS AND TREATMENT.

By Walter Channing, M.D.

> "Removal of polypi by ligature is really a dangerous operation, resulting not unfrequently in pyæmia and death, which seldom happens when the ecraseur is used."

The above is copied from the London *Lancet* of Oct. 15, 1864, being the introductory remarks by J. M. Sims, M.D., of New York, to a paper on the treatment of Polypus of the Womb. The important contributions of Dr. Sims to modern surgery have placed him among the distinguished surgeons of the age, and give to his opinions on surgical subjects important practical weight. It is on account of this influence that I beg to communicate the results of ligation in many cases which have been treated by myself by this method. Before doing this let me allude to cases in which the ligature was unsuccessful—in which death followed its application.

"Dr. Duncan passed a ligature round a polypus of the fundus. As soon as he tightened it, he produced pain and vomiting; as soon as the ligature was slackened, these symptoms ceased; but whenever he attempted to tighten it, the pain and vomiting returned. The ligature was left on, but loose; the patient died about six weeks afterwards, and on opening the body it was discovered that the uterus was inverted, and that the ligature had included the inverted portion." Mr. Abernethy and Dr. Wm. Hunter both give cases of death after the application of the ligature for polypus, in which dissection showed that the polypus in each case had dragged down and partially inverted the womb, which had been encircled by the ligature, which had produced death. Roux published a case of fatal convulsions and hæmorrhage. Examination discovered a polypus and a tubercle of a similar character in the anterior wall of the womb. Roux infers that the removal of the polypus would have done no good, as the woman would have died of *tumor*—a practical error which a writer says he wonders that Roux could have fallen into. And so must any one say who reads the case and knows how successful has been the ligature in the treatment of polypus. Cases will be given which will show this.

Do these cases of death after ligature affect the question of the safety of using the ligature for the removal of polypus? Death in them was the consequence of applying the ligature in cases of inverted womb. Not that the use of the ligature in cases of inverted womb is always fatal. In no case has death followed such application of the ligature in this inversion, in the cases in which the writer has either applied it, or has aided in its use, as will more fully appear in the sequel.

What is polypus uteri? It is an *insensible* tumor springing by a *pedicle* from the fundus—the body—the cervix, or the os uteri. I say "by a *pedicle*." And this is the only mode of origin and growth in the books. I have met with at least one case in which the polypus was *sessile*—having no pedicle, and forming a very striking exception to the received origin.

Polypus uteri is *insensible.* This is not only an idiopathic fact in our history, but has important practical bearings. There is one other uterine disease which has the same characteristic—*insensibility*—viz., cauliflower excrescence of the os uteri. The symptoms of the latter aid the diagnosis. Among these is profuse *watery discharge,* attended occasionally by hæmorrhage; but except in one case I never knew the first to accompany polypus, which case will be reported hereafter. There is another fact in the history of cauliflower excrescence, which, though post-mortuary, is not without interest. No matter how large and how firm during life the mass may be, nothing will be found in the vagina after death, except a small shreddy mass, with scarce any resemblance to the organized substance which existed during life.

I have seen but one case of cure of cauliflower. This occurred many years ago. The late Prof. J. C. Warren surrounded the tumor by ligature. Mrs. —— recovered. Some patients have derived benefit from the ligature. Two were able to be about and apparently well for several months. At length the disease recurred. The ligature was again used, and various means to check growth were also employed. These cases were fatal.

Prolapsus uteri may be mistaken for polypus. The os uteri will correct the error, provided sufficient care be taken to ascertain what the tumor really is. I have known *procidentia* uteri to be mistaken for *uterine inversion.*

Case.—I was walking in a neighboring city, when I met a physician of the place well known by me. He expressed great pleasure in meeting me, as he had a case of chronic inverted womb under his care, which he wished me to see with him. Before reaching the address, Dr. —— said that his patient had a child about three years ago, and that the womb was inverted at the time, or soon after, since which she had scarcely left her bed. "Has she had much, or any hæmorrhage?" asked I. "No," said he, adding that her general health had been and was very good.

I found Miss ——, for she had not been married, looking as well as any perfectly healthy person could look. She had been well cared for, and had done nothing to diminish flesh.

My attention was soon called to the *inversion.* A large tumor, reaching half way to the knees, was lying between the thighs. No os uteri was seen, and even upon examination one was not at first discovered; but upon raising the tumor a rough spot of an inch or more diameter was seen, which exactly resembled one which is very well represented in a drawing of chronic procidentia in Clarke's plate of that displacement—which spot, in my case, looked very much like a superficial cicatrix, in the centre of which was a slight depression. I asked Dr. —— if he had a probe, or a female catheter, for I had neither. He said he had not. I asked the lady of the house if she had a lead pencil. She said yes, and brought me one of Faber's, of good length and size. It was soon cut into good shape, and was applied to the centre of the depressed spot above referred to. Slight pressure there made entrance into a cavity which admitted its whole length—six inches or more. It was next withdrawn, but nothing followed it. It had entered the os uteri. Pressure was now made with both hands upon the tumor in an upward direction, when the tumor gradually rose and entered into the cavity of the pelvis as high as was judged necessary. A compress was applied to the external organs, which was kept in its place by a T bandage. Miss —— was directed to keep quietly in bed, and carefully avoid all exertion. I saw Dr. —— some time after, and learnt that his patient had recovered perfectly.

Suppose for an instant that I had, on the representation of Dr. ——, proceeded to apply a ligature, what would, under the circumstances, have probably been the result? Suppose the ecraseur had been used, as recommended by Sims, or rather as was recently done here, as I have been informed; would not the result have been the same, viz., death from hæmorrhage in two hours, more or less? How could such a mistake have been made? The tumor in that fatal case was in the vagina. It was inverted womb, taken for polypus, and the ecraseur was used under that terrible error in diagnosis. I cannot understand how such a mistake could have been made. Polypus is insensible. Inverted womb is exquisitely sensible. I have had abundant opportunities to ascertain these points. Four cases of chronic inversion of the womb have come under my notice. Three of these were treated by myself, with the ligature, and in one I was an assistant. They were all of them successful as far as the operation went, but the friends of this one against positive orders raised the patient up to arrange her dress, and that of her bed, when she fainted, and at once sunk and soon died. It is singular that of the attending physicians in these four cases not one knew what was the pathological condition of his patient. Two, who were told what it was, denied the statement, saying that they had attended the patients long enough to know that their disease was nothing but chronic uterine hæmorrhage. The pain which the application of the ligature and ecraseur always produces one would think would be enough to make the operator stop, and to learn whether it be *insensible polypus* or *sensitive womb* he has to deal with.

The latest and best English authorities tell us that when we know we have inverted womb to deal with, as a precautionary measure a ligature should be applied, lightly, for three or four days before we apply either excision or stronger ligation. This measure prepares the womb for the severer and more dangerous one to be adopted for cure. My cases occurred before this important preparation of the womb for the operation had been suggested; and it was so far anticipated by the manner of using the ligature (the ecraseur being then unknown) as to prevent dangerous, sudden strangulation. Let me add that if another case come under my care I shall apply the *ligature*, which has always in my hands been entirely successful.

In my first case of inversion I consulted one of our best surgeons as to the best mode of applying the ligature. He advised me to use force enough to strangulate the organ. There would be much suffering for a short time, but the rapid removal of the inverted organ would be accomplished. I adopted his method, and to prevent suffering etherized the patient. Mrs. —— came soon out of this state, but was at once seized by most severe suffering, apparently threatening death. The pain was referred to the abdomen—the whole of it—as if sudden and violent peritonitis had occurred. She grew rapidly cold—the pulse quick and scarcely to be felt; severe nausea; pallor. She could not speak, but expressed her sufferings by screams. Warmth was immediately applied; fomentations to the abdomen; stimulants, &c. &c., till reaction occurred. Mrs. —— had a slow, but perfect recovery. In a case of questionless polypus much pain was felt from the ligature. I at once slackened it, when the pain ceased. Upon examination, the tumor was either sessile or the pedicle very short. Moderate drawing of the ligature was now used and well borne. Recovery was perfect. This is the only case of polypus in which any trouble has followed the use of the ligature.

Many cases of polypus have fallen under my observation and care. Two of the patients furnished five cases: Miss ——, 2; Mrs. ——, 3. In the last case I removed two, by ligature, one of which was sessile, or had a very short pedicle. Its situation was peculiar. It lay *across* the pelvis, from side to side, springing from the left and crossing to the right. There was one other novel symptom, or fact, in this case. The tumor always appeared during the catamenia and disappeared in its absence. Dr. ——, living in the country, having described the case, I advised him to give Mrs. —— ergot in fair doses, and if the polypus appeared, to let me know. This he did;

and I went to ——, and found the tumor as described. But how to apply the ligature? The tumor was of large diameter, and prevented much manipulation. I introduced the canulæ of Gooch, and holding one of them at the left extremity of the tumor, in its place, carried the other to its right extremity. Here by dipping it down behind the end of the tumor, the ligature of course following it, the canula was swept along its lower portion till it met its fellow. The rings were now adjusted, the ligature tightly drawn, and the operation was completed. In a few days, the ligature being tightly drawn daily, the polypus was cut off, and recovery without accident rapidly followed. A year or two after, another polypus was discovered, accompanied by its common symptoms. There was nothing unusual in its situation, and the ligature was applied with its usual success. A year after, Mrs. —— died of pleurisy. The womb was sent to me. Its cavity was very large. The marks of the place of the former tumors were visible, and from the fundus was hanging, by a long pedicle, a third small polypus. I have operated for many other similar tumors, and all of them have done perfectly well.

Two cases only of internal polypi have come under my care. Of these I will give a sketch.

Case I.—Mrs. —— had been confined a fortnight, and had done perfectly well, when she was seized with severe hæmorrhage. This not yielding, her physician, my friend Dr. York, desired me to see her with him. This I did. He said he believed there was a polypus in the womb. I examined Mrs. ——, and was satisfied that Dr. York's diagnosis was correct. I applied a ligature immediately, large hæmorrhage existing, and drawing the ligature firmly, it came away, bringing with it a circular portion of the tumor, of the exact size and thickness of one of my coat buttons. Hæmorrhage at once ceased, and Mrs. —— made a rapid and excellent recovery. Taking all the circumstances of this case into consideration, the recent delivery, &c. &c., I cannot but think it one of the most remarkable and interesting instances of uterine outgrowths.

Case II.—I was desired to see Mrs. —— in consultation. She came from the country, and had been several months under Dr. ——'s care, and was nothing better. Dr. —— said he had discovered in the womb a foreign body, which he thought was a blighted ovum. It was irregular in outline, and was insensible. The more pressing symptoms were accumulations of water, accompanied with severe pain; great distension, which at length was followed by sudden and large discharges of water, and this by temporary relief. She was, however, a permanent invalid. Her appearance was not morbid; she had sufficient flesh, but was incapable of any exertion.

Upon examination, I felt a foreign body in the womb, which was insensible. Dr. —— had made many fruitless efforts to bring it away. In some of its characters it seemed to me to partake more of a polypoid outgrowth, and for which I advised a ligature. This was agreed on. A small, irregular mass came away. No pain followed the application or use of the ligature. From the time of its removal, Mrs. —— began to improve. There were no longer any watery accumulations, and Mrs. —— went home. In a year, Mrs. —— came again to town and engaged me to attend her in labor, which she soon looked for. This happened in due time, and was favorably accomplished. Mrs. —— went home in perfect health. The only anomaly in this case, suppose it to have been polypus, was the watery discharge—hæmorrhage being the common attendant on polypus. It were very easy to add to the above cases of polypus in which I have used the ligature, every one of which has done well—not one fatal case having occurred. Nay, more—no dangerous constitutional disturbance has occurred in one of them.

The JOURNAL contains two cases of believed polypus, which turned out to be cases of inversion. The ligature was employed. Much suffering attended its use, but both recovered. They were communicated to two medical societies as cases of polypus, and upon examination were both found to be cases of inverted womb—bristles readily passing into and through the Fallopian tubes.

To return to the extract from the *Lancet*, in which Prof. Sims, of New York, says:—"Removal of polypi is really a dangerous operation, resulting not unfrequently in pyæmia and death, which seldom happens when the ecraseur is used."

I have never seen the ecraseur used but once, viz., in a case of ovariotomy, and I never wish to see it used again. I am very happy to say that in this feeling concerning this instrument I am supported by one of our ablest surgeons. The case in which I saw it used was one of ordinary ovarian dropsy. The patient died of peritonitis five days after. I do not object to the ecraseur because it was used in this case; for of the other cases I have seen of ovariotomy, only one patient has lived. A few days ago I asked a professional acquaintance if he had seen any instances of this operation. "Oh yes," said he, "I have lately operated three times." "And with what result?" asked I. "They all died," said he. The instrument used was not mentioned, it not being inquired after. I have used the ligature in all the cases of polypus which have come under my care, and I do not recollect a case in which there was the least appearance of local or grave constitutional disturbance. There was not in any one the least sign of *danger*.

THE Medical Department of the Army is engaged in preparing the plans for an immense hospital, to be built upon the Severn river, near Annapolis, Maryland, which will eclipse in extent and accommodation any other institution of the kind in the world—the farm on which it is to be located comprising about one thousand acres.

CASE OF NECROSIS OF THE BONES OF THE HEAD.

By Johnson Gardner, M.D., of Providence, R. I.

[Communicated for the Boston Medical and Surgical Journal.]

About three years since, in 1861, Mrs. ——, of Providence, R. I., now 43 years of age, the mother of nine healthy children, applied to me with chronic laryngitis and ulceration of the tonsils, with the palate partially destroyed and perforated with many large holes.

The whole cavity of the throat was lined with purulent matter, and the disease had extended so far as nearly to destroy the voice, articulation being so imperfectly accomplished that with the greatest apparent effort only now and then could a word be understood. The patient was also suffering with great pain in the head, the integuments being much swollen and inflamed in places over the parietal bones, with one or two open abscesses. In giving the history of her case she began by sayimg that she had been sick with a violent cough ten or twelve years previous, which continued for a long time, and was so persistent that her friends thought she had consumption; and that Dr. Miller was consulted in her case. That since that time she had employed several other physicians, and although her cough was better, in every other respect her health was much worse. She had become very much emaciated, and presented a pale, cadaverous appearance, with great loss of appetite and strength, and every indication of much suffering; her pulse was about one hundred in a minute.

My first prescription was a solution of thirty grains of nitrate of silver in an ounce of water, which I thoroughly applied to the throat daily with a curved pharyngeal syringe, ending in a perforated bulb; at the same time I prescribed twenty drops of tinct. ferri muriat., three times a day. But at the end of a week, finding the result unsatisfactory, that the disease of the throat was not much if at all arrested, and the voice almost entirely gone, I substituted therefor a lotion of acid nitrate of mercury, and applied it thoroughly, every day or two, in the manner before described. I also gave the patient four grains of iodide of potassium three times a day, and a two-grain pill of sulphate of quinine before each meal. This treatment acted like a charm. The ulceration was gradually lessened, and in the same ratio the voice was restored, till at length the disease of the throat ceased to be troublesome, and no local application, other than a gargle of solution of chlorate of potassa every morning, was required. But as the condition of the throat improved, the pain and swelling of the integuments of the cranium grew gradually worse, and about a year since the suffering had become so great and the discharge from the abscesses so profuse, that I did not believe the patient would long survive. Yet I could think of no better course than to persevere with the internal treatment. Whenever, on probing, I felt that one of the pieces of bone had become loose, I proceeded with the aid of the scalpel and bone forceps to extract it. In this way, one after another, a number of pieces of bone have been removed. The last was taken from the head the 29th of November last, with some difficulty on account of its angular shape and its being entirely covered with integuments. With a single exception near the right eye, all the places from which pieces of the bone have been removed are now healed, leaving each a sunken, contracted, indurated cicatrix. The largest specimens are parts of the parietal bones. Two are from the superciliary ridges of the os frontis, one from each, and some of them are from the superior part of the occipital bone. Thus nearly all of the upper part of the head has been invaded by the ravages of this disease. But now, contrary to my long-continued expectations, there is an encouraging improvement in the general health, as well as the local disease. The strength has greatly improved. The voice is entirely restored, and the patient is able to superintend her domestic affairs, and enjoy the pleasures of society.

It may be supposed that the sufferer was a victim of secondary syphilis, but to support this theory no evidence other than what has been narrated can be found. The patient is a respectable woman, and there appears no good reason why her veracity should be questioned. She positively asserts that she never had a vestige of this disease in any form, and that neither her husband or any other member of her family ever had it, to her knowledge. Besides her children are, and have been, perfectly healthy.

ON CONSTRUCTION AND DEGENERATION. (WITH ESPECIAL REFERENCE TO THE LUNGS.)

By T. C. Allbutt, B.A., M.B., Cantab., Physician to the Leeds Infirmary.

In April last I had the honor of laying before the readers of this Review certain opinions on the states of the animal body in health and disease. I pointed out the growing belief that the higher ranges of vital action, correlative with certain visible developments of structure, are dependent upon the building up of more and more complex structural units; that what we call the manifestations of force in healthy function result directly from the stability of such units; that immaturity depends upon incomplete molecular construction, and disease upon the arrest or failure of it; that the processes of such failure or degeneration exhibit those of growth in an inverse series, so that resulting phenomena can only be called healthy and morbid in a special and relative sense; lastly, that the elaboration of such structural complexity depends upon the influence of neighboring matter, which has already attained the required degree of complexity, and by resolution is converting tension into energy.

If the organs, therefore, which are set apart in the higher animals for the exercise of such energy—i. e., the "constructive glands"—fail in previous attainment of the required tension, we must find as consequences imperfect elaboration of structural elements, failing structure, and failing function. In many of those affections which are called "blood diseases" we see a dynamic change throughout the whole system. With a lessened energy of molecular construction we get diminished tension, and the changed state "ἐν δυνάμει" becomes manifest "ἐν ἐνεργείᾳ."* Structural advance is therefore proportionably slackened, and general equilibrium also disturbed, as is seen in quickened circulation and inordinate action of organs. Thus arise many forms of disease, varying in individuals as the external conditions, and as the paths of least resistance in the peculiar structure of each. For instance, a common result is fibrous degeneration, showing itself as rheumatism and fibræmia in systemic weakness, or as fibrous tumors in local weakness. Either through general or local want of tension in molecular combination, the special structural character cannot be impressed on nutritive material, and the parts degenerate from the special towards the general—that is, from the differentiated structure of a particular organ to the simpler fibrous mode common to all parts of the body. What is lost in intensity is, for the most part, gained in extensity, and the loss in quality is gained in quantity.

If the failure in tension be still greater, we descend through transitional forms from rheumatism to pyæmia, and from fibrous to cellular tumors. In gonorrhœa, for example, the contact of matter in the state of cellular degeneration tends to propagate a similar descent in contiguous matter in the bloodvessels and neighboring tissues. A greater demand is made upon the constructive glands in the vicinity, and their functions and structure thereby modified or disturbed.† If the upward processes be active, the degenerative influence produces little effect, and molecular tension is not overcome to any perceptible extent, or to an extent only perceptible in modified function. A brick taken out of a well-compacted wall is lost with indifference; if, however, the wall be less coherent, local dislocations will ensue upon the removal. If, again, the parts hang loosely together, shock or demolition will result throughout its structure. Thus, in still weaker states of the body, that diminished tension of parts caused by the influence of local purulent declension may be propagated indefinitely throughout its constructions. A general tendency to failure will, in such a case, show itself in the rigors of shaken nervo-muscular equilibrium, in the rapid pulse of shaken nutritive equilibrium, and in structural changes passing through half-rheumatic and half-pyæmic phases, down to the dissolution of all the higher states of molecular tension, in the liquid blood and cellular degradation of rapid pyæmia. The infinite multiplication of the lower forms which replace the higher is exactly parallel to that phenomenon as observed in the epidemic degenerations of animal and vegetable forms.*

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* In using Aristotle's words for the sake of convenience of expression, I should perhaps guard against any real distinction between the two terms as in his sense.

† This secondary disease of the glands in all parts of the body is a study of much interest. I hope during the next year or two to investigate it more thoroughly, "ne et oleum et opera philosophiæ nostræ pericrit."

How in local failure of structural tension, with diminution of resulting energy, the more special structures degenerate into the less special, sinking cadence by cadence through the infinite series of fibrous, fibro-cellular, amorpho-cellular, and amorphous degenerations, has been so ably shown by Dr. Wilks, that I need but allude to his labors.

If the reason of disease be such as I have endeavored to set forth, should we not have bestirred ourselves to clear out of our minds and out of our books all of those forms of expression which connote the foreign nature of morbid growths? Still more, should we not be very wary in allowing the use of such expressions as "deposits from the blood," and the like? In the absence of proof to the contrary, we are bound to regard all morbid products as modifications of local construction, local degeneration being the starting point.

A cancerous tumor of the pylorus is no more a deposit from the blood than is the pylorus itself. In one sense both, in another sense neither, are deposits therefrom. Neither could arise without nutritive material, and, on the other hand, neither could arise except as implicated in the development of neighboring parts. Cancer is formed in an individual as any other tissue is formed, all being alike parts of a certain scheme of evolution, and dependent on the blood only for material of nutriment. Perhaps few regard cancer from any other point of view; but if language is to be believed, still fewer look upon "tubercle" as of similar generation. The development of the body, indeed, depends on circumstances as well as on original nisus; nevertheless, some parts of certain organisms tend, in spite of all circumstance, to follow an order of structural arrangement which we call "tubercular," rather than another order, which we call normal. Both are equally natural, but the latter is the more useful. The "blood" no more deposits the one than it deposits the other. Nevertheless, many able writers persist, from habit or conviction, in speaking of the deposition of tubercle as dependent upon the blood, in some special or structural sense. Their words convey an idea of implantation from without, and they talk of finding tubercles as they would talk of finding truffles.

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‡ Whether the so-called "parasitic" forms which accompany the degradation of superior forms, are modifications of pre-existing structural elements, as are pus-cells, or whether the originating germs be introduced from without, is of secondary importance in this inquiry. In either case there must be a parallelism of structural processes between the parasites and the decaying constructions from which they take their existence. Dermatologists are agreed that whatever be the source of the originating germs of favus and like forms, they can luxuriate only in failing constitutions, and are to be extirpated by constitutional melioration, just as the forms of structural degradation in the lung. Thus the essential relation between the development of masses of favus and of masses of tubercle is one of likeness.

It seems, therefore, worth while to consider more particularly the reason of tubercular generation, taking its generation in the lung as an instance of its modes. Phthisis pulmonalis is a chronic pulmonary disease, as opposed to acute pneumonia; and nearly all chronic thoracic diseases have relations with phthisis. We could not possibly have the two opposite modes of disease—the acute and the degenerative—better contrasted, the former due to external hindrance or violence, the latter to internal weakness. I have preferred the word "degenerative" before the word "chronic," as I consider the distinction of time to be always accidental, and often fallacious. Degenerative disease, the so-called "chronic," is not a mere extenuation of the acute. The one may end in the other; the one may so pass into the other, or be so engaged with it, that demonstration alone cannot show their difference at any given moment; they are, nevertheless, always separable in reason. In the lung, as elsewhere, the acute disease is that which comes of causes from without, such as intropulsions by cold, mechanical injuries, or the sudden action of some poisons; the chronic (or degenerative) disease shows failure, on the other hand, from within; and according to the degree of internal weakness it presents many varieties of degeneration, from a slow development of inferior structural products to swift disorganization. Between acute pneumonia and ulcerative pneumonia, or phthisis, there lies a series of semi-acute, semi-degenerative pneumonias varying in character as the ratio of the external to the internal causes.

In slow phthisis small portions of the lung structure slip imperceptibly into the lower stages of organization, giving rise by loss of quality to increase of quantity or mass. Such masses are no longer fibro-cellular, but more or less cellular, passing into the amorphous, and hardening as their moisture evaporates from the lung. The establishment of small points of lesion is followed by a more or less efficient reparative process, which often excites inflammation at corresponding points of the pleura and other neighboring parts. The permanence of these masses or tubercles, like their origin, depends primarily on the stability of the circumjacent tissue, and they are themselves accidental manifestations. The etiology of phthisis pulmonalis, therefore, lies not in the tubercle, but in the properties of the lung-tissue and in the processes of its construction and degeneration.

If I may again refer to my former use of the words Construction and Degeneration, it will be seen that the former word signifies the elevation of organic matter through higher degrees of intensity and complexity, by the influence of neighboring matter already possessed of such properties; and that by degeneration I mean the resolution of such neighboring matter into more extense and simple forms, with conversion of tension into energy.

Let us now conceive an action of some depressing agent upon the whole body. In place of the highest degree of tension we shall get a proportionate relaxation throughout the tissues. The tension between the tissues and the circulating fluids will yield, and will show itself in quickened pulse, defective cell-generation, weak and flabby tissues, and local changes in the relation of these to the blood, as seen in wandering congestions, perspirations, fluxes, and the like. Such symptoms are common in states of debility. These results become more manifest in more advanced states of depression. There is imperfect cell-generation, as seen in unhealthy mucous membrane on the tongue, stomach, and bowels; also in the loss of subcutaneous tissue, falling of hair, clubbing of nails, and like signs. As the depressing cause continues, failing of function and structure must penetrate deeper, until some one or more of the vital organs are affected, and death sooner or later ensue.

Such a simple depressing influence ending in death, we see experimentally produced in the case of negroes, monkeys, dromedaries, &c., when transferred from a warm to a colder or less pure atmosphere. Such a form of decay and death, again, results from the action of an exhausting disease like diabetes. It becomes, then, a most interesting question with such conditions to determine which internal organ or organs will first give way. Given a body with no special tendency to disease, and a due molecular tension throughout, which internal organ or organs will first give way on the lessening of such tension by any simple depressing cause?

The remarkable constancy with which degenerative pulmonary disease shows itself after a more or less prolonged action of depressing causes, would lead us to the conclusion that phthisis pulmonalis owed its appearance to no specific vitiation. This form of disease seems rather to be the most direct route taken by general structural failure. In such states, we should avoid speaking of the supervention of phthisis as the arrival of a new and distinct disease, and should rather speak of reaching phthisis as a particular stage on the way of dissolution. No doubt the lungs may, in certain individuals, be congenitally weak, and so liable, as any organ may happen to be liable, to degeneration, in spite of all circumstances. But it would also seem that in the healthy body, where all organs are of normal validity, the lungs are relatively the weakest in structure. When, therefore, depressing causes, original or accidental, acting upon such a body as a whole, become stronger than is compatible with completion of construction, the part where structure will first give way is probably somewhere in the lung. Clearly, when conditions are adverse, some part of the body must go first, unless all parts are of equal strength, which we believe not to be the case. Disease of such a part would then be common, and we should expect to see a previously healthy body put under exhausting conditions finding its way to disintegration along the line of the failure of such part.

Now no structure in adult man seems more likely to present such weakness than the lung. We see therein a structure exceedingly delicate and exceedingly elaborate. Other parts may vie with the pulmonary structures in delicacy, but I think not in delicacy and complexity together. The lung has to strive, not only against the evanescence of delicate elements, but also against the demands of an elaborate organization of such elements. The degeneration of cells in the stomach is not so serious a matter as it would be did this necessity there also exist of reconstructing them after an intricate pattern. Hence the peculiar disadvantage at which the pulmonary structures stand; and hence their early liability to irreparable injury under the action of causes affecting the whole body alike. Of all the bodily organs, the lungs seem in the adult to stand the nearest to the brink of destruction.* Seeing, then, that the causes of phthisis are as many as exercise a common influence of depression, we need not look beyond for any specific vitiation in the blood or elsewhere. "*Frustra fit per plura, quod fieri potest per pauciora.*"

I presume, therefore, that as material is abstracted, say in diabetes, or as tension is diminished, say by change of climate, constitutional feebleness, or other causes, so all parts of the body become progressively degenerate, such degeneration being less or more important as it invades less and more important structures; and that such degeneration early becomes breach of continuity in the delicate and complex lung-structure, the activity of progressive ulceration being in an inverse ratio to the reparative power. Such causes, when they act powerfully, will bring on rapid destruction, as in the reported cases of starvation producing pulmonary gangrene; if they act with less energy, we shall only find a gradual accumulation of larger masses of an inferior product, in place of the less bulky but more highly organized lung-tissue.†

In like manner we shall find, according to the activity of the causes, degeneration more or less advanced in other organs, such as the heart, the liver, the stomach, or the intestines. All these degenerations belong to that pathological unity, the phthisical process, which is the process of simple structural disintegration of the human body. Of this process, ulceration of the lung is an early and serious manifestation.

Let us proceed a step beyond this point. The line of thought which leads to discovery of the relations which pulmonary degeneration bears to that of other organs, will lead us on to discovery of the relations which the degeneration of certain parts within the lung bears to that of the other parts. That rapid disintegration or gangrene of the lung which results from depressing causes of severe and rapid action, as it is quickly developed, so it owes its initial position in the lung more to the accidents of accession (such as slight passing congestions and the like) than do those slower degenerative processes which, being independent upon passing accident, obey some more uniform law. It is notorious that some uniform condition exists which determines degenerative disease towards the apices of the lungs. This condition, however, remains undiscovered. I have stated my belief that degenerative disease is early manifested in the lungs because of their more delicate and complex structure. Can we now extend this reasoning to the parts of the lungs itself? Let us take the lung in a simple state of its evolution; let us take, for example, the lung of a serpent. In it we find the vascularity and complexity towards the apex, while the base is a mere membranous bag. If we take the lung of a tortoise, we find a like relative distribution of the more and of the less delicate and complex tissues, though the fuller development of the whole organ makes the difference less obvious. As we pursue our investigations upwards. we find this distinction less and less manifest as the progressive evolution of pulmonary structure advances; so that in mammalia the distinction between apex and base is no longer evident. But it can scarcely be supposed that a law holding good for so many stages of the ascent is suspended for the remainder; and it is much to be wished that an accomplished microscopist would find leisure to investigate this matter. The result of my own slight observations, and of my inquiries among my friends, carries me only to this point —viz., that it seems true that the lung-structure in man becomes more delicate as it approaches the trachea.* All the analogy, indeed, afforded by the exquisite and continuous gradation of form and color in nature would prepare us to expect gradation of structure in the lung. This much is certain—that whatever may be true of the lung as a whole, the structure of the lobules is undoubtedly such as I have suggested. The structure of each lobule increases in coarseness from about the air-tube to the periphery; the extreme difference in size of the cells being in about the ratio of ten to one. Now when the degenerative tendency is so intense as to invade large parts of the lung from the beginning, as in pyæmia or large superficial burns, there we find disease starting in the finer portions of the lobules and progressing towards the coarser. In such pneumonias we accordingly find many foci of disease separated by more healthy tissue; and such states we call lobular pneumonias. Such pneumonias are, of course, degenerative, allied to phthisis, and opposed to the acute pneumonia.

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* With advancing years the relative activity of organs among themselves varies, as the functions themselves are modified. Thus in early life it is not the pulmonary structure, but rather that of the constructive glands which seems to go first. That scrofula, which is simply a feebleness of the constructive powers, should commence in the constructive glands at a time when their delicacy of structure and their vascularity is greatest, and the demand upon them the strongest, is probable enough. With advancing years the conditions are changed, the glands are less active, and accordingly less liable to disease. The atrophy of all these glands in old persons is a regular observation in the dead-house. To this subject I hope to return.

† I may perhaps say here that I avoid in general any use of that metaphorical and deluding term "inflammation."

In acute pneumonia, we find large portions of the lung uniformly injured by the pressure of congestion, which acts thus uniformly in accordance with the law of gravitation. This disease, therefore, takes the bases of the lungs, which generally lie at greater disadvantage; or under certain circumstances it attacks the backs of the lungs when the congestion happens so to fall. Even at the bases the lung-structure is too delicate to bear a sudden intropulsion, which might have left other organs unharmed.

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* In my microscopical researches I have had the advantage of friendly aid from the Rev. W. T. Kingsley, of Kilvington.

We seem, then, to have reached this point. Of all structures in the body the lungs are most liable to lesion, as being the most delicate and complex. Such lesion may arise by injury from without, giving rise to acute pneumonias, or by weakness from within, giving rise to degenerative pneumonias. The type of the former is common acute pneumonia of the bases; the type of the latter is an ulcerative pneumonia of the apexes, known as phthisis pulmonalis. Between these two extreme types lies a series of pneumonias, partaking more of the acute or more of the degenerative character, as congestion or structural weakness is the more efficient cause of their accession. At this point, having arrived at something like a period, I may close the present essay.

I have to thank the Editor of this Review for the opportunity of laying before the profession certain propositions, and their application in the case of diseases of the lung. That I have given in this essay a mere outline of this application, and have altogether declined the discussion of other forms of disease after a like manner, is due to a want of sufficient time and space at my disposal, and in no way to want of will. This, however, is the less to be regretted, as I think we have the necessary facts already among us. On reviewing the number of facts collected during several years past in illustration of my own opinions, I find few that are not in possession of my readers. What is wanted is not so much a wider knowledge of phenomena as a change in the point of sight from which we regard them. As physicians, we are oppressed with an overlying weight of doctrine handed down to us from their worships the practitioners of physic of years past.* The science of biology being then non-existent, and scientific method barely understood, half fanciful and half metaphysical interpretations were the fig-leaves by which their ignorance was concealed. Although their interpretations are now mostly changed, yet much of the nomenclature and of the terminology belonging to them remains. When these are stripped off the truer lines of modern thought will become more evident; diseases will be seen in their real light, no longer as separate entities, but as conditions of existence; biology will swallow up pathology; and partial and fragmentary conceptions will be replaced by unity and consistency.

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* Fortunately the study of abstract Physiology is passing out of the hands of those who have to study the applied science. Hitherto this science has flourished as astronomy and meteorology would flourish if left to sailors. Clearly their first classification would be a "pathology" of storms and eclipses.

It will be a happy day for students when they are taught no more to see in the sick man a state made up of several diseases shaken together like bits of glass in a kaleidoscope; and when they are led rather to recognize in health, in disease, and in all the varieties of biological phenomena, but so many modes of being, and so many modes of life.—*British and Foreign Med.-Chir. Review.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 19, 1865.

The Responsibility of Criminals.—The circumstances of the Malden murder, which took place a twelvemonth ago, are undoubtedly still fresh in the recollection of our readers. The murderer was discovered at last, as much to the relief of his own weak spirit as of the public excitement. He was a young man, who had apparently never resisted a temptation to wrong-doing provided pleasure were to be gained by it, and who yet wished to preserve a fair character in the eyes of the world. To steal, to burn, to kill were the descending steps in crime taken to screen what was at first a slight slip from the path of rectitude, and taken, too, apparently without any attention to the warnings of conscience. The final crime was undoubtedly committed without long premeditation. He saw a large sum of money at the bank, and nothing to prevent its becoming his own but the life of another young man. Once in his possession, he would be relieved of the embarrassment into which previous temptations had led him. He deliberately goes home, procures his pistol, walks back and murders a fellow-being, against whom he has not the slightest personal ill-feeling. He was tried, confessed his guilt, and was sentenced to the extreme penalty of the law. It is not our intention to discuss the propriety of capital punishment, but so long as the law is as it is, and magistrates may pardon those condemned to life-long imprisonment for similar crimes, we must agree with the public in the justice of the sentence in this case.

We desire, however, to allude to the attempt, made in this instance as in so many others, to prevent its execution by raising the plea of insanity or imbecility. This plea was referred to a medical commission, composed of Dr. Tyler of the Mc Lean Asylum at Somerville, and Dr. Walker of the South Boston Institution, and the result of their examination of the condemned will be found below. It would seem as if it were thought by some that the mere act of murder were enough to establish the insanity of the person committing it, and that unless he feels at the moment of his crime its entire enormity he should be held irresponsible. To such and to all we recommend the perusal of the following temperate and most wise remarks upon the responsibility of the criminal in this case, nor do we see how the Committee on Pardons could have done otherwise, after such a report, than to refuse to recommend a mitigation of his sentence.

"*To His Excellency John A. Andrew, Governor of the Commonwealth:*

"In accordance with your wishes, we have endeavored to make a careful and thorough examination of the mental condition of Edward W. Green, now confined in the Middlesex County Jail.

"We have failed to discover any trace of insanity in him, nor can we consider him 'an imbecile.' But he is a man of inferior capacity, little education, and little desire for it, and of limited general information.

"His affections are strong. He is fond of children, and loves his wife and child.

"In all common matters of social life, his moral sense is quick and correct. He by no means confuses right with wrong. He had some notions of personal obligations to God, but of religious knowledge and experience he is most astonishingly ignorant.

"Until his arrest it appears he has led an idle, frivolous, selfish, self indulgent life, though not given to the excesses *most* common to young men, caring for little but to be popular, to write a good hand, to drive a fast team, to eat, and to have a good time, giving hardly a thought voluntarily to other things than these, and rarely one to more religious subjects.

"He *knows* that he has committed a great crime, and that he deserves punishment for it. He *feels* in a measure that he has wronged the parents and friends of Converse, his own wife and child, and the community in which he lived, and in a measure he lamented this, but his greatest grief seems to be that by any act of his he should have placed himself in so sad a position.

"We cannot consider him irresponsible. He came to his crime as other men have come to great crimes, through a preparation of previous misdeeds, and by permitting the object of his desire to fill his whole field of view, and to utterly exclude every thing else. We believe that he was less qualified to resist the temptation to wrong doing than many other men, but that this disability grew rather from a neglect of cultivating his moral powers, than from any congenital absence thereof.

"We are ready to give a more detailed account of the examination, and our reasons for the above opinion, if your Excellency should desire it. Your obedient servants,

John E. Tyler,
Clement E. Walker."

The late John L. Fox, M.D., Surgeon U.S.N.—At a meeting of the Boston Society for Medical Improvement, held Jan. 9th, Dr. J. B. S. Jackson called the attention of the Society to an event of deep interest to most of those present, which had occurred since the last meeting; viz., the death of John Lawrence Fox, M.D., Surgeon U. S. Navy. Although not officially connected with the Society, Dr. Fox had always been a regular attendant at its meetings by invitation, while residing in Boston and the vicinity; and had won the respect and esteem of its members by his interest in its proceedings, as well as by his high professional attainments and his amiable character.

Dr. Jackson moved that the death of Dr. Fox be entered upon the Records of the Society.

Dr. Warren, in seconding the motion, expressed his high appreciation of the character and talents of Dr. Fox, whose death he considered a severe loss to the country.

Dr. Bowditch said he had for no one greater respect than for Dr. Fox. He was a man of honor, highly accomplished in his profession, and stood in the highest rank in the service. Dr. B. alluded to the last illness of Dr. Fox, and spoke of his enthusiastic and patriotic self-sacrifice; laboring to the last, even when very ill, and at length reluctantly quitting his post only at the solicitation of brother officers and friends.

Dr. Williams briefly alluded to the high moral and professional character of Dr. Fox, and to the great loss sustained by his friends and the public in his death.

Dr. Borland moved that the Secretary be requested to convey to the family of Dr. Fox the substance of the sentiments expressed on this occasion, and to cause the same to be printed in the Boston Medical and Surgical Journal.

The motions were unanimously adopted. F. Minot,
Sec. Boston Society for Med. Improvement.

Professor Brown-Sequard.—The lecture by Dr. Séquard on the physiological and morbid effects of a lesion of a lateral half of the spinal cord, which was delivered on Monday last at the Medical College to a large audience of physicians and students, was exceedingly interesting, and illustrated how much of practical importance in the study of the obscure diseases of the nervous tissues may be gained by a few operations on one of the lower animals. All will regret that the health of the distinguished lecturer is such as to prevent the delivery of an entire course this season. We trust that he will be able to return by the opening of the next winter term to resume the duties of his new professorship.

Changes in the New City Hospital.—We learn that Dr. John Homans has resigned his position as Senior Physician on the Medical Staff of the City Hospital, and that Dr. John B. Reynolds has been appointed to fill the vacancy. The public could hardly expect more of the former gentleman than to give this institution at its start the counsel and experience which his age and attainments have made so valuable; and its present crowded condition and popularity furnish a gratifying proof that he may retire without a doubt as to its future usefulness and entire success. The choice of his successor could not have fallen upon one more fit in every way to sustain its reputation.

Interesting Departure.—We take the following effusion from *Punch*. The subject to which it refers has so recently filled a large space in our pages that we think it will be read with a sympathetic feeling.

"There has been an unusual absence of ozone lately."—*Meteorological Correspondence, passim.*

Oh where, and oh where, is our usual ozone gone?
Its absence surely must have been remarked by every one.
Can nobody inform us why and whither it has flown?

Oh where, and oh where, did our usual ozone dwell?
'Twas somewhere in the atmosphere, but where I cannot tell;
You must ask Professor Airey, or some other learned swell.

Suppose, oh! suppose, that our ozone's in the sky!
Just for a change it may perhaps have thither tried to fly—
Can we exist without it, I wonder, if we try?

Explosion of Benzine Vapor.—The schooner Tropic Bird, lying in harbor at Carleton, New Brunswick, had her cabin newly painted and grained. Two seamen retired to rest in their berths, leaving a light and fire burning. They awoke an hour or two after to find themselves, and everything in the cabin, on fire. They made a desperate attempt to force the door, but the heat had so warped it that it could not be opened. A moment after there was a loud explosion, and the skylight in the roof of the cabin was blown off, the flames shooting up in a large column through the vent thus made. This of course attracted attention outside, and the fire was put out and the men rescued, in a terribly burned condition. The only explanation of this singular affair which has been suggested is, that sufficient gas was generated from the benzine in the fresh paint, confined as it was in a close apartment, to take fire from the candle.

The Preparation of Matches free from Phosphorus.—Hierpe has published (*Polytech. Centralblatt*, 1864, p. 696) the following receipts for a composition for the heads of matches, and for an igniting surface. That for the matches is as under:—

Chlorate of potash	4 to 6	parts.
Bichromate of potash	2	"
Ferric oxide	2	"
Strong glue	3	"

Oxide of iron may be replaced by oxide of lead or of manganese. The above preparation will not ignite on sandpaper, but requires a surface specially prepared for it, and the author employs the following on the boxes:—

Sulphide of antimony . . .	20	parts.
Bichromate of potash	2 to 4	"
Oxide of iron, lead, or manganese .	4 to 6	"
Glass powder	2	"
Strong glue or gum	2 to 3	"

Another composition is described by Dr. H. Poltzer (*Polytech. Centralblatt*, 1863, p. 1642). A solution of sulphate of copper is divided into two equal parts—one is supersaturated with ammonia, the other with hyposulphite of soda. The two solutions are now mixed, and the mixture is briskly stirred. A violet-colored powder now deposits, which is a compound, says the author, of hyposulphurous acid with oxide and suboxide of copper, soda and ammonia. A mixture of this salt with chlorate of potash detonates when struck with a hammer, and when rubbed in a mortar ignites and burns like gunpowder, leaving a black residue.

The above salt the author proposes to use for matches. It is not soluble in water, and the mixture with chlorate of potash is not hygroscopic. The mixture may be made with moist chlorate and the gum solution, and can be safely dried at 50° C. or higher. It inflames when rubbed on a rough surface, and the temperature developed is sufficiently high to ignite sulphur on the stick.

The only difficulty the author finds is in making the mass coherent: when dried on the stick he found that it would crack and drop off when rubbed. A manufacturer will probably soon overcome this difficulty.

The proportions made use of were one part of the copper salt, and two parts of chlorate mixed in a sieve, and then made into a mass with solution of gum, together with a little glass powder. This mixture was applied to matches dipped in sulphur as usual.—*Am. Jour. of Pharmacy,* from *London Chem. News,* Dec. 10, 1864.

THE following recipe will furnish a preparation having the pharmaceutical properties of chlorodyne, according to Dr. Ogden:—℞. Muriate of morphia, grs. viij.; water, flʒss.; perchloric acid (25° B.), gtt. xx.; chloroform, flʒiss.; tinct. of Indian hemp, flʒi.; hydrocyanic acid (U.S.P.), gtt. xii.; molasses, fl℥ss.; oil of peppermint, gtt. ij.; oleoresin of capsicum, gtt. i. To the morphia and water in a small flask add the perchloric acid, and heat until a clear solution is obtained. Then add the molasses, previously warmed to render it fluid. Heat the mixture, and agitate well. When cold, add the other ingredients, and mix thoroughly.—*Am. Jour. of Pharmacy.*

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 14th, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	25	40	65
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.3	36.0	77.3
Average corrected to increased population	00	00	84.53
Death of persons above 90	0	0	0

BOOKS RECEIVED.—A Treatise on Military Surgery and Hygiene. By Frank Hastings Hamilton, M.D. New York: Baillière Brothers.

MARRIED,—In Vassalboro', Me., Dr. A. J. Hart to Miss Sarah Ellen Coombs, both of China, Me.—In Southport, Ct., Frederick Danne, M.D., of New York, to Marian, daughter of Capt. Henry Wilson, of Southport.

DIED,—In this city, 17th inst., Louisa B., wife of Dr. Francis H. Brown and daughter of Charles F. Eaton, of Salem.—In Clinton, 11th inst., Pearson T. Kendall, aged 73.—In New York, Dr. A. B. Snow, Surgeon 1st Corps N. Y. Engineers.—Dec. 7th, of typhus fever, Dr. Moses H. Ranney, Superintendent of New York City Lunatic Asylum, Blackwell's Island.

DEATHS IN BOSTON for the week ending Saturday noon, Jan. 14th, 65. Males, 25—Females, 40.—Accident, 1—anæmia, 2—apoplexy, 1—disease of the brain, 1—bronchitis, 2—cancer, 1—consumption, 11—convulsions, 5—croup, 1—debility, 1—diabetes, 1—diarrhœa, 1—diphtheria. 1—dropsy, 1—dropsy of the brain, 5—scarlet fever, 1—infantile disease, 1—intemperance, 1—disease of the kidneys, 1—congestion of the lungs, 3—gangrene of the lungs, 1—inflammation of the lungs, 4—marasmus, 1—measles, 1—paralysis, 1—phlebitis (of leg), 1—premature birth, 1—scalded, 1—smallpox, 4—suicide, 1—teething, 1—unknown, 4—whooping cough, 1.

Under 5 years of age, 25—between 5 and 20 years, 3—between 20 and 40 years, 19—between 40 and 60 years, 10—above 60 years, 8. Born in the United States, 44—Ireland, 16—other places, 5.

THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

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REPORT OF OPERATIONS IN THE OPHTHALMIC DEPARTMENT OF THE CITY HOSPITAL OF BOSTON,

Under the care of Dr. Williams, for four Months ending Dec. 31st, 1864.

By Edward G. Loring, Jr., M.D., Assistant.

[Communicated for the Boston Medical and Surgical Journal.]

Extraction of Cataract, twelve cases, in patients from 65 to 75 years of age. In five patients both eyes were operated on the same day. Ether was given in eight of the operations, and more favorable results were obtained in the cases where it was made use of; though, as will be seen, the difference of termination must be ascribed to other causes rather than to the administration or non-administration of an anæsthetic. The downward section was made in ten, the upward in two cases. In only one instance has any secondary operation been required for the removal of remnants of capsule. All but one of the patients were discharged within three weeks from the day of operation. A considerable amount of vitreous was lost in two cases; but no ill consequence followed, the eyes recovering so as to be able to read.

Eight operations have been entirely successful; one will require a secondary operation for the removal of capsule obstructing the pupil, and three have failed. In two of the latter, the conduct of the patient was such, in removing the dressings soon after the operation, and in other respects disregarding the injunctions given him, that the surgeon should not be held responsible for the unfortunate result.

Two operations for Iridesis, for congenital cataract, in a child nine weeks' old. In this patient only the central portion of the lens was opaque, and iridesis was done in preference to the operation for solution of the cataract, for the following reasons: first, because the operation involves scarcely the slightest risk, and does not require to be repeated, as is often the case with the operation for division and solution of the lens; secondly, the patient is able, in after life, to dispense with the use of cataract glasses, which are, on the contrary, required when the crystalline lens has been removed by absorption.

The iridesis was done by making a puncture, with a broad needle, through the sclerotica, just in front of the iris, then a fine blunt platinum hook, bent at a suitable angle, was passed through the wound and over the lower margin of the pupil, and the iris was drawn out a short distance, and left between the lips of the wound, there to form adhesions. The pupil is thus displaced downwards, and has a balloon shape instead of the normal circular form; but the deformity is not conspicuous, and, if regarded as such, proves a far less annoyance than the wearing of cataract glasses.

Ether was given, and the child was not conscious of the operation; neither did it appear to suffer a moment's inconvenience afterwards. A slight blush of redness immediately about the minute wounds was the only symptom, and the child was discharged on the third day. When seen a few weeks afterwards, the result of the operation was entirely satisfactory; the child evidently noticing objects, and the eyeballs having lost in a great measure the oscillating motion peculiar to sightless eyes.

Out-scooping of cataract, combined with iridectomy, was performed in one case on a patient of middle age. An incision was made at the upper part of the cornea with a very broad, bent, lance-shaped knife. Iridectomy, upward, was then done, and, the capsule of the lens having first been divided, Critchett's vectis scoop was introduced behind the crystalline, and the lenticular substance removed, the scoop being three times inserted. The patient recovered rapidly.

Iridectomy was done in eight other cases; in one case, of glaucomatous affection, with advantage to the patient, but in several instances of closed pupil after chronic iritis, and in one case of sympathetic ophthalmia, no benefit, as regards vision, was obtained or expected, the cases being regarded as unfavorable, and of too long standing to allow of the hope of restoration of vision, and the operation being performed principally to relieve the pain and arrest the process of disorganization.

The entire iris was removed in one case. The pupil was blocked up by deposits; but as the iris seemed in other respects healthy and the cornea and anterior chamber were normal, it was determined, as the patient's other eye was unsound, to give this eye the chance afforded by iridectomy. When careful traction came to be made upon the lower part of the iris to bring out a portion of it for excision, it was seen that the adhesions of the false membranous deposits closing the pupil were so firm that, instead of separating from them at the lower edge of the pupil, the iris gave way at its upper border. It became folded upon itself in such a manner that Dr. Williams deemed it safer to remove the whole iris than to allow it to remain in the eye. Not the slightest inflammation ensued, the eye recovering as rapidly as after an ordinary iridectomy: but during the operation the lens and its suspensory ligament were found to have undergone such transformation as to warrant the belief that all the internal tissues must have suffered, and to exclude the hope of vision.

Enucleation of the eyeball in two cases. In the first, the eye had been penetrated on the 3d of July by a fragment of percussion cap, and vision destroyed. About a month later the other eye became affected by sympathetic ophthalmia. All treatment having been neglected till 19th Sept., the time of entrance to hospital, vision in the second eye was limited to scarcely more than a perception of light. The injured eye should have been removed at least as soon as the earliest symptoms were manifested in the other eye; but the operation still offering the sole chance of an arrest of the sympathetic disease, it was determined on. Vision slowly improved in the remaining eye for a brief period; but this temporary gain was followed by a gradual loss of sight, the morbid process going on notwithstanding the performance of iridectomy and a resort to suitable internal remedies.

The second case of enucleation was for melanotic disease. When discharged, the patient was doing well, though sufficient time had not elapsed to allow of an opinion as to the return of the disease.

Division of the internal rectus, for convergent strabismus, was done in four cases, all of them successful.

Ablation of large staphyloma, involving the anterior half of the globe, was resorted to in one case, with excellent success. The protrusion was so large as to interfere with closure of the lids, and caused great discomfort to the patient. After etherization, the operation was done as proposed by Mr. Critchett, five curved needles armed with sutures being first passed through the globe, from above downwards, just posterior to the ciliary region, after which the anterior portion of the eye was excised. The needles were then drawn through, and the five sutures tied. The patient had no pain, and no inflammatory action was set up. All the sutures were taken out within a week, and the patient was discharged on the tenth day. The wound of the eye had then closed, and the patient had an excellent stump for the support of an artificial eye.

ENDURANCE OF HUMAN LIFE.—A remarkable instance of the power of supporting hunger has recently occurred at Horsham, near Melbourne, in Australia. Two boys, aged nine and five, and a girl of seven, being sent into the "bush" to gather broom, lost their way, and after a long search, in which the natives were employed, were discovered sleeping on a clump of broom. They had been eight days and nine nights without food, and with only one drink of water.—*London Lancet.*

SUGGESTIONS FOR IMPROVING THE DIET OF THE IRISH LABORER.

By E. D. Mapother, M.D., Surgeon to St. Vincent's Hospital, Dublin, &c.

* * * * * * * The faults of the potato as an extensive article of human food have been so often expatiated upon, that I fear I shall be deemed tiresome if I allude to them; but it is notorious that principles of public health require repeated reiteration before they achieve any practical reform. The value of any aliment is pretty nearly proportional to its similarity in chemical composition with the blood which it is destined to form; and, judged by this test, the potato makes a sorry figure. Their composition, in 100 parts, is compared in the following table:—

	Blood.	Potatoes.
Nitrogenized or flesh-producing matter, - -	20.00	1.6
Unnitrogenized or heat-producing matter, - -	00.15	22.83
Saline matter, - - - - - · - -	00.63	1.56

It will be readily seen that the heat-producing element, or the starch, is out of all due proportion, especially as the mean temperature of this climate is but 51 degrees. I have no doubt but that this over-abundant supply of starchy material is a principal cause of the great prevalence of rheumatic diseases among the inhabitants of this country; for they are owing to some acid (in my opinion probably carbonic), which such food produces in the blood, and which is prevented from being eliminated through the skin by the great humidity of the atmosphere. The great size of the starch grain renders its conversion into sugar difficult. The amount of gluten, or flesh-producing material, is so small as to be quite unable to keep up a high degree of physical strength and energy. The Hindoos and the inhabitants of tropical America subsist respectively on rice and the plantain, substances which bear the most striking similarity in composition to the potato; and were it not for the loftier impress the Creator has stamped on the Caucasian race, the ennobling influence of Christianity and civilization, and the mental vivacity of the Irish people, I cannot help believing that our poor countrymen would in time, from similarity of food, sink to as low a level in the human scale. The amount of labor each of these races is capable of performing is most strictly in proportion to the amount of nutritive matter in their national diet.

It has been calculated that a healthy laboring man should be supplied daily with such an amount of food as shall contain 5500 grains of carbon and 125 grains of nitrogen; and Dr. Letheby, the officer of health for the city of London, states that these are contained in about 12 oz. of beef, 20 oz. of bread, and ½ an oz. of butter. This food, besides being expended in maintaining the never-ceasing vital processes of the body, is capable of supporting an amount of muscular work equivalent to the raising of about three millions of pounds to the height of one foot. I am aware such theoretical estimates must be controlled by practice; for aliments differ widely in digestibility, cohesion, mechanical state, &c., as well as in chemical composition; but what a vast amount of potatoes should be consumed to afford the due quantity of nitrogen! From 8 to 12 pounds of potatoes was the average allowance to each laborer; and this great bulk produced such a distension of the stomach and other digestive organs, that they came to resemble those of a pure vegetable-feeding animal; whereas man's teeth and digestive organs indicate that he was destined to live on a far different kind of food. The bulk of the potatoes has also been found a serious obstacle to their carriage to any locality where scarcity should arise. The introduction of flesh-producing food into the blood tends to the removal of the effete or worn-out materials, and thus may be explained the frequency and fatality of fever and other contagious diseases among the poorer classes; for it is upon these effete products that fevers are fed. I have no doubt but that examination of the blood of the Irish poor would show fibrin, which is one of these waste products, to be more abundant than in that of other races. * * * * * * * * *

The New Zealanders are most frequently attacked by scrofulous diseases since Captain Cook substituted the potato for fish and pig's flesh, their former food. The ash of the potato is most remarkably poor in lime and magnesia, materials of the first importance in building up the framework of the body; and this may account for the considerable frequency of rickets, a disease of the bones produced by their deficiency. The water being strongly impregnated with lime may obviate this difficulty in some districts. It is a well-known fact that the cornea or transparent coat of the eye is apt to become destroyed if food of a varied character, or containing a due proportion of nitrogen, be not supplied. This is accounted for by the fact that that structure contains a large amount of nitrogen, and is not very freely supplied with blood. Nearly all intelligent travellers acquainted with the influence of food upon health have urged strongly that the dietaries of the Irish poor-houses are too unvaried, although not deficient in quantity, and the frequency of ophthalmia seems due in great part to this fault. All the remarks which I shall make upon the improvement of diet would apply to that of poor-houses; and here I must express my surprise that the potato, which, with all its faults, is a valuable antiscorbutic, is wholly excluded from the regular meals of their inmates.

By the report of the Census Commissioners, just issued, we learn that there are 3,149 blind males and 3,730 blind females, or 1 in every 843 of the population. In 1851, the proportion was but 1 in 864. The inferiority of the food of females, and the depreciation of the food of the poor in general, go far to explain these figures. In Norway the food is very poor in nitrogen, and the proportion of blind is 1 in 540. In the United States it is superior, and the ratio is but 1 in 2,489. * * * * * * * *

As there is no safer guide in estimating the value of foods, when modifying circumstances are duly considered, than chemical analysis, I have appended the following

Table of the Nutritive Value of Food per Cent.

	Nitrogenized.	Starchy.	Fat.	Salts.	Water.
Arrow-root, - - - -	. . .	82	. .	. .	18
Potatoes, - - - - -	2·0	23	0·2	0·7	74
Cow's Milk, - - - -	4.5	5	4·1	0·7	86
Rice, - - - - - - - -	7·0	76	0·3	0·3	14
Indian Meal, - - - -	9·0	65	8·0	1·7	14
Wheat Flour, - - - -	11.0	70	2·0	1.7	15
Oatmeal, - - - - -	12.0	62	6.0	3·0	15
Eggs, - - - - - - - -	14·0	. .	10.5	1·5	74
Beef, - - - - - - -	19·0	. .	5·0	2·0	73
Peas, - - - - - - - -	22·0	58	2·0	3·0	13
Beans, - - - - - - -	24·0	44	1·4	3·6	14
Lentils, - - - - - - -	29·0	44	1·5	2.3	14

I shall now proceed to allude to a few of these in detail, which I believe might be very advantageously used in greater quantity than at present, premising that a dry, nitrogenized food seems suitable for the circumstances of Ireland, as, the temperature being moderate, no great abundance of heat-producing food is needed, and as the great humidity of the atmosphere prevents much loss of water by the skin.

In those countries where the supply of animal food is over-abundant, it is of great importance that the surplus should be preserved, and exported for consumption in other countries. Thus, in Monte Video and other districts of South America, vast numbers of cattle are slain, and the choicest parts of the animals' flesh are cut in thin flakes, dipped in brine, and then dried in the sun. This tasajo, or jerked beef, has been used for many years as food for the negroes; but of late, owing to the American wars, it has not reached that market. The authorities of Monte Video have, therefore, exported this jerked beef in great quantities to the British ports. Mr. Gilmour, the consul at Glasgow for the Republic, has, at the suggestion of Professor Archer, the director of the Industrial Museum of Scotland, had forwarded to me a large quantity of the beef, specimens of which I submit. When steeped in water, it increases three times in thickness and weight. It is not expected to supersede the use of flesh meat with those who can afford it; but I am convinced no greater boon has been offered for many years to the poor and laboring classes in this country. It sells at 3*d.* a pound, or 2¼*d.* if large quantities are purchased. With the invaluable aid of Professor Galloway, of the Museum of Irish Industry, I have submitted it to analysis, as well as averaged samples of corned beef prepared in this city, and I subjoin the comparative results.

The amount of fat in each is not astonishing, when it is remembered that one animal enjoyed free exercise—the other was stall fed:—

	Monte Video Beef.	Corned Beef.
Water,	17·93	62.08
Ash,	21·66	9·97
Fat,	3·05	21.07
Nitrogenized substances,	57·35*	6·88†
	100·00	100·00

I am informed that an employer in Belfast is testing its value in the feeding of 1500 workmen; but the only way in which it will find its way to the homes of the poor is by giving them an opportunity of tasting it cooked in the best methods. This was accomplished by a working men's free supper in Edinburgh; and the agent has authorized me to announce that he would supply the beef for a similar meeting, if organized in this city.

The only method of cooking which I will detail, from the directions of the Monte Video commissioners, is the following, as I can from personal experience vouch for its producing a wholesome and palatable dish:—After steeping the beef in water, to which soda is added in the proportion of one ounce to the gallon, changed three or four times, for three hours, take a sufficient quantity of the meat, according to the size of the dish required, and cut it into small pieces; take an equal quantity of potatoes, and peel and wash them; put them into a clean saucepan, and cover them with water, and let them stew over a slow fire (adding pepper, salt, chopped onions, &c.), until well cooked, in the same manner as when making Irish stew.

From the great heat of the climate, the beef cannot be saved in thick masses; and as some of the savory and volatile materials of the meat are lost by cutting it in thin slices, I have suggested that Professor Morgan's patented plan of salting by injection be adopted, especially as the beef killed in summer is very superior. It might be also economically and commercially advantageous to reduce the beef to the form of extract before exportation. The extract of beef contains all the nutritive portions of the meat, and, from its soluble and concentrated state, is the most powerful restorative the physician can employ. It can be best made, as Liebig directs, by boiling the meat, chopped fine, in eight times its weight of water, straining, and evaporating the solution in a water bath to a soft, but solid state. Such a product would cost about 8*s.* a pound in this country, but should be obtained for one third that sum in Monte Video. The addition of a little hydrochloric acid would dissolve the flesh more completely.

The tribe of plants which far excel all others in the amount of nitrogenized matter they produce, is the Leguminosæ. Their seeds have been used for many centuries by the inhabitants of Central Europe, Asia, Africa, and Australia; and how perfect a support they afford is attested in Holy Writ. In the Book of Daniel we read that the Hebrews were supported upon pulse and water, "and after ten days their faces appeared fairer and fatter than all the children that ate of the king's meat." Herodotus tells us, too, that lentils formed the food of the laborers who built the Pyramids. The following analyses by Payen exhibit the composition of peas—firstly, gathered green and then dried; and, secondly, those gathered when dry:—

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* Containing 7·67 Nitrogen, = 49·80 Fibrin.
† Containing 0·49 Nitrogen, = 3·18 Fibrin.

	Peas dried green.	Dry ripe Peas.
Starchy matter,	58·5	58·7
Nitrogenized matter,	25·4	23·8
Fatty matter,	2·0	2·1
Cellulose,	1.9	3.5
Salts,	2·5	2.1
Water,	9·7	9.8
	100·00	100·0

Their superiority in composition, and greater solubility in water, when pulled green, suggests that that plan should be adopted, especially as the ground is thus left in July ready for another crop, and insects cannot damage the return. The starchy matter then is sufficiently abundant, and the nitrogenized substance exists in great quantity, and is, moreover, of the most excellent quality, being legumin, which is identical with the casein of milk, and therefore of all aliments the most soluble and most natural. Their nitrogenous element is so abundant that one pound of peas must form as much muscle as fifteen pounds of potatoes. Legumin, with lime, forms a hard, insoluble, and rather indigestible compound; and it is well known that in this way peas boiled in hard water are not very quickly or comfortably digested, but the addition of a little soda, or the substitution of river, or, still better, rain water, in which they should be steeped for a few hours, removes this objection. However, moderate slowness of digestion is not an objection to an aliment for a working man, as hunger then more slowly returns in the intervals of his meals. The Scotch often use the pea-meal, simply mixed up with boiling water,—a mess they call "brose." During a recent visit to the neighborhood of Mr. Allan Pollok's vast property in the county of Galway, I was informed that his laborers, especially during harvest time—the season of greatest muscular exertion—were fed upon pease porridge, and the only objection I heard offered to it was "that it was very stuffing, and that it was a long time before appetite returned." This was a complaint which I wish our half-fed peasantry were able to make; and at any rate it could be easily removed by diminishing the proportion of peas to other food. The highly nutritious value of the pea has been long recognized in China, where they manufacture most excellent cheese from it. Under the name of tao-foo it is hawked through the streets of their cities, and consumed in great quantities. They make it by steeping, boiling, grinding, and dissolving the peas in water. The vegetable casein is precipitated by gypsum, and is then salted and pressed into moulds. The sandy, gravelly, and calcareous soil of many parts of Ireland is very fit for the growth of peas, which, moreover, require no manuring if seeds, and not abundant straw, be required.

The leguminous seeds are particularly rich in lime and in phosphoric acid, that great constituent of the nobler parts of man, the brain and locomotive organs, the apparatus of his mental and corporeal powers. As regards the mode of preparing these valuable articles for human food, much has to be learned; but I now exhibit specimens of bread made with various proportions of pea:—Griddle cakes of one-half wheat-flour and one-half pea-flour, one-half wheat-flour and one-half pea-meal, of three-fourths wheaten-flour and one-fourth of pea-flour, of three-fourths wheat-flour and one-fourth pea-meal, of three-fourths wheaten-flour and one-fourth bean-meal; loaves of one-fourth pea-flour and three-fourths wheat-flour, and of one-third bean-meal and two-thirds whole-meal; which I have labelled accordingly, and now submit for your inspection. Pea-soup is an article too universally valued to require notice. Indian meal would be a very fit addition to pea-flour, as its large amount of fat would obviate any astringent property which it sometimes exerts. I may add, that at present these meals may be had at reasonable prices, which, however, would be greatly reduced, if the crop were generally adopted. Pea flour, from which all husk is removed, sells at 3*s.* 6*d.* per stone, pea-meal at 2*s.* 5*d.*, and bean-meal at 1*s.* 10*d.* It is stated that immensely expensive article, "Revalenta," is but Glasgow pea-flour, of about the value of 2*d.* per pound. Beans sold this year in the county of Clare, for 8*d.* a stone. Peas enter into the dietary of the navy and emigrant ships, and are highly prized; and beans form a considerable element of the food of the U. S. army, and of the laboring population of that country. During the famine, the authorities seem to have recognized their nutritive value: for one vessel alone, the U. S. war-ship "Macedonia," carried over 11,388 lbs. of peas, and 19,424 lbs. of beans. A very superior pea is imported from Canada. In Prussia and Germany the pea is felt to be the poor man's comfort; and in Bavaria it is invariably added to the rye-flour in making their bread. I had this summer an opportunity of judging of its value as a general food in these countries. In Scotland, too, it is well known that a mixture of peas and oat-meal forms the staple diet; and the more closely farmers and other employers can be induced to assimilate the food of the Irish to that of the Scotch laborer, the higher they will raise his mental and physical capacities.

The advantages of whole-meal bread over that made with white flour alone are numerous. Chemical analysis shows that one-third of the entire gluten, or nutritive portion of the grain, exists in the bran, and the microscope confirms this fact; and surely it is fitter that this valuable material should be used by man than bestowed upon our cattle. It has been proved, too, that the large amount of gluten promotes the conversion of the starch into sugar—a necessary change before it can be of the slightest alimentary value. Even the outermost husk is useful, as its finely divided particles stimulate the natural movements of the digestive canal. If this proceed to an objectionable degree, the gluten can be extracted by water, and the bread then made with this. A dog which will sink in forty days if fed solely on white bread, will thrive well if fed upon whole-meal bread. The use of the whole-meal would also remove the temptation to adulterate bread with damaged flour rendered white by alum, sulphate of copper, or other injurious agents. If, however, white bread be still preferred, let lime water be substituted for these hurtful salts, as suggested by Liebig, and adopted by the Glasgow bakers with great success. As whole-meal contains three times as much saline matter as fine flour, it is an especially suitable food for children, when the solid frame-work of the body is being built; and as bran contains six times as much potash as flour, it should not be wasted, as that alkali is the only known preventive of scurvy. We are receding in the art of dietetics in regard to whole-meal bread, for up to some forty years ago it was most generally used in these countries. In France, in 1658, an ordinance of Louis XIV. was issued, which had the effect of compelling the bran to be used with the flour as human food, and in ancient times the process of bolting flour, or separating the bran, was unknown. The gluten which is separated in starch manufactories amounts annually to several thousand pounds; and if this were boiled in water to which a little salt was added, and then dried and ground, a material of the highest nutritive value would be produced.

There are many parts of this country unsuited for the culture of wheat, and in these places rye would form an admirable substitute. It thrives and produces abundant returns in sandy, calcareous soil, even at high elevations; endures greater cold, ripens in a much shorter period of sunshine than wheat, and grows so rapidly that it overreaches all weeds, which are then comparatively harmless to it. It contains equal quantities of nutriment with that grain, and the bread made from it excels wheaten bread in retaining moisture and remaining fresh. Its crumbling character makes it easily digested, and it is said a smaller portion satisfies hunger and supports life than of most other breads, while a smaller proportion of the flour is required to make an equal weight of bread. The only objection which can be urged against it is the trivial one of color. It forms the staple food of central and northern Europe, and all parts of America where Germans have settled; and it is recorded of the people of Westphalia, who live almost altogether upon it, that they are more free from dyspeptic complaints than almost any other people. Rye contains twice as much as lime, and three times as much phosphoric acid, as wheat. M. D. Jonnes, a great French statician, ascertained that the soil of Ireland would produce three times as much rye as that of England, and one and a half times as much rye as wheat.

The leaves of the cabbage plant abound in nitrogen and lime, materials so deficient in the potato, and have been long recognized as a most valuable addition to that food, in the form of kolcannon. I may mention that in the absence of this plant the leaves of the turnip and other green crops form a most wholesome aliment, which in this country is generally wasted or given to feed cattle, whereas in London they are valued even above the cabbage plant. The removal of the leaves of the turnip would not be injurious to this root, or rather underground succulent stem, at the proper period. It may not be generally known that boiling turnips with the skins on improves the flavor, and renders them so mealy that they may be crushed into a flour, which may be profitably used in making a cheap bread. I have now alluded to as many food topics as time will allow; and however humble my ability to discuss them may have appeared, I trust no one will deem the subject unimportant. As an hospital medical officer, the effects of a faulty diet are daily present before me in the patients seeking admission, and I cannot help reflecting on some remedies. The cultivation of maize, buck-wheat, quinoa, dhurra, Indian vetch, and other food grains, and the utilization of many now wasted parts of the animals we slaughter, are questions worthy the attention of economic botanists and agriculturists, and of individuals or societies concerned in the preservation of public health, if such existed in Ireland.—*Journal of Royal Dublin Society.*

Bibliographical Notices.

Lectures on Venereal Diseases. By William A. Hammond, M.D
Philadelphia: J. B. Lippincott & Co. 1864.

This volume is made up of 20 lectures, a part of which were delivered to a medical class in Baltimore, and published in a medical journal. The course was interrupted by the departure of the author in 1861 to enter the army again, and the whole have been lately re-written and are now published in a handsome volume of 287 pages. Dr. Hammond modestly says that they are not to be looked upon as a complete treatise on venereal diseases or to be classed with the excellent work of Dr. Bumstead, which he pronounces "better than any volume on the subject with which he is acquainted." This judgment will explain to all who have read the work thus alluded to the views of our author in relation to most of the main theories relative to syphilis; they are entirely in conformity with the modern doctrine of dualism. In some of the minor details, however, he has his own opinions, and expresses them in a very decided manner, although he always endeavors to furnish clinical evidence of their truth. Indeed, one of the great merits of the book is the freshness afforded to nearly every page by the experience of its writer, which was gained in great part during his sojourn with the army in Mexico. Whether the conclusions from these observations are entirely satisfactory or are perhaps somewhat hastily drawn, must be determined by a perusal of the volume, for a proper consideration of these points would require a review in detail of all the modern

doctrines in relation to syphilis. We can assure o
that time thus spent will never be regretted, and
at least that there is more need to study venereal
if Ricord had never written a page of the writi
have thought would render all other books upon
cessary.

It may be interesting to those who remember t
mond in relation to calomel while occupying t
general, to know what views with regard to the u
treatment of syphilis he now advocates. They w
in the following extract, but throughout the book
considers it the only remedy in the *cure* of this di

"You know what my views are relative to m
you, over and over again, what a double-edged w
it has been and still is abused to such an extent,
the evil it has done far exceeds all the beneficial
resulted from its use. * * * *

"However, we are now considering the treatm
syphilis, and, as I have already told you, I regard
proper and very valuable means to be used in this
regard it as essential, but I do look upon it as alm
cific against the venereal poison as is quinia agai
ter which gives rise to intermittent fever. I do
having myself often treated the disease under c
any form of mercury, either internally or exte
At the commencement of my military medical life
with the views of Mr. Guthrie, who was a viole
and I treated for two or three years all my cases
an atom of this medicine. But I was not satisfi
The manifestations of this disease were more seve
than was to have been expected; and I, therefo
you will all do when you discover that you have be
views and doing wrong acts—changed my practic
regretted it to this day."

The writer's views on the nature of gonorrhœa
we present them to the reader in his own word
We can only say that he founds them upon eviden
the judgment of all. They certainly deserve the
servers, and are undoubtedly in some measure tru

"1st. That the virus of an infecting chancre, w
a secreting mucous surface, may give rise to an i
surface, attended with a muco-purulent discharge

generally gives rise to a muco-purulent discharge without th
sary production of a chancre; that if there be an abrasion
bility to chancre is much increased; that both diseases may
one individual; and that the discharge from the inflamed
membrane is capable of giving rise to a similar discharge
persons; and that it is not followed by any specific cons
symptoms.

"4th. That the two sources named are the only ones from
contagious gonorrhœa can *originate*, though it may be *transm*
cording to its kind, from one individual to another.

"5th. That there are thus two species of virulent gonorrhœ
ponding to the two species of chancre; that both are contagi
that only that due to the virus of the infecting chancre is fol
constitutional infection, or can give rise to syphilis by inocul

"6th. That the matter of each of these species of gonorr
when inoculated, give rise to its own particular form of
but that greater care and longer contact are necessary than a
ed with the virus direct from the chancre.

"7th. That the muco-purulent discharges from the urethra
na, due to inflammation or irritation caused by stimulating
cess of venery, acrid applications, the introduction of inst
injuries, ascarides, &c., are not contagious, and are simply
urethritis or vaginitis, in nowise possessed of any specifi
teristics."

The Philosophy of Marriage, in its Social, Moral and Physical
with the Physiology of Generation in the Vegetable and Anim
doms. By Michael Ryan, M.D., Member of the Royal C
Physicians and Surgeons in London. From the last Londo
Philadelphia: Lindsay & Blakiston. 1864.

There will always be a question in the minds of many whe
books as this should be placed in the hands of the public.
sent volume, however, seems to have been written by the au
ly with a purpose to benefit his fellow men, and although an
curiosity may lead many to read it, the information it may i
those completely ignorant of many important laws of nature
giene must far outweigh any objection of this kind.

A Comprehensive Medical Dictionary: containing the Pron
Etymology, and Signification of the Terms made use of in
and the kindred Sciences. With an Appendix, comprising a
list of all the more important Articles of the Materia M

of Latin and Greek origin. We would not restrict the application of this observation, however, to any class among us, for we are sorry to confess that there is a general want of uniformity in many of the words in daily use by the profession. As the author truly says, correct pronunciation is to the speaker what correct spelling is to the writer, and too little attention is paid to this part of medical education. Some excellent prefatory rules are given relative to accentuation, which deserve the attention of teachers as well as students, for the former are in great measure accountable for the subsequent shortcomings of their hearers in this respect. The book is published in a beautiful form, and cannot help being of value in the library of every one interested in medicine.

Theory and Practice of the Movement Cure: or the Treatment of Lateral Curvature of the Spine; Paralysis; Indigestion; Constipation; Consumption; Angular Curvatures, and other Deformities; Diseases incident to Women; Derangements of the Nervous System; and other Chronic Affections, by the Swedish System of Localized Movements. By Charles F. Taylor, M.D. Second Edition. Philadelphia: Lindsay & Blakiston. 1864.

Our readers are already acquainted with the method of treatment set forth in this volume. There is undoubtedly a substratum of truth in the theory, for we see every day the power of mere muscular exercise in the preservation of health, even when used in no definite direction. It is without question of great service in some deformities and in certain deranged conditions of the general economy, but we doubt very much the propriety even of its application to many of the affections in which the author claims for it a positive curative action. The volume is clearly printed, on smooth, white paper, and is illustrated with numerous explanatory cuts.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 26, 1865.

Alleged Deaths from Inhalation of Sulphuric Ether.—The recent death of Mr. and Mrs. Defrees at Ballard Vale has given rise to a report, which has been widely circulated through the public press, that their death was caused by the inhalation of sulphuric ether, which they had both inhaled for its anæsthetic properties after retiring at night. To any one acquainted with the physical properties of sulphuric ether, the story bears the stamp of improbability on its very face. We hold that it would be next to impossible for any one, even with the intent to commit suicide, to kill himself by inhaling this anæsthetic. Such is its extreme volatility that it would be hardly possible for enough of its vapor to be breathed in by any one to whom it was self-administered, after the stage of unconsciousness was reached, to prolong that condition to the extinction of life; the ether in the vehicle would all evaporate first. Such would not be the case with chloroform, however, as repeated instances of accidental death in this vicinity have shown. The unfortunate victim of bodily or mental suffering has fallen asleep with the fatal napkin moistened with this agent over his mouth, and the heavy fluid, instead of rapidly flying off into the surrounding atmosphere as ether does, has continued its stupefying work after the volition of the inhaler was subdued, to the complete destruction of life. It is very important that the truth in this matter should be known, and that the innocent anæsthetic, which is almost universally employed here, should not have a reputation of deadliness fastened upon it by unfounded newspaper paragraphs, which only belongs in reality to its European representative, chloroform. We find in the *Andover Advertiser* the following authentic statement of the cause of the death of this unfortunate pair.

"At the coroner's inquest, held in Ballard Vale, on Wednesday, the 18th inst., upon the bodies of Joseph S. DeFrees and Augusta B. DeFrees his wife, it appeared in evidence that they had slept in the room in which they were found dead, since Friday last, the 13th inst. That the house was recently built and was still very damp, and the rooms consequently very tight, not allowing the air to come into the rooms through the cracks about the doors and windows, as is ordinarily the case. On Friday night they had a coal fire in their room in the early part of the night. The fire was in a small, open-grate stove. They went to bed about twelve o'clock ; the door of the room was tightly closed during the night. They left their room at half past five on Saturday morning, having slept in this tight room with a fire in it about five hours and a half. On Saturday the door of the room was open during the day. On Saturday night they again slept with the room door closed and with a fire, and the same number of hours ; and the same on Sunday night, the room door having been left open during the day. On Monday a fire was kept in the room all day and the door kept closed. On Tuesday morning, after having been in their room as on the previous night, with a fire and the door closed, the room not having been ventilated at all for thirty-six hours, they both got up suffering *very severely* with headache. Mr. DeFrees also vomited after he had been up a little while, and was so unwell that he did not go to his work during the day. In the afternoon, however, they were both quite relieved of their headache, and felt as well as usual. During the day on Tuesday the room door was still kept closed, and a fire kept in the room most of the day. On Tuesday night they went to their room, which had not then been at all ventilated for forty-eight hours and more, at a little past eight o'clock. It is supposed they slept till about midnight, when they were heard doing something with the stove, probably putting on more coal. Nothing more was known or heard of them until about half past six o'clock on Wednesday morning, when they were found in their bed dead, apparently having gone quietly to their last sleep.

"In accordance with this evidence, the jury returned a verdict that 'they came to their death by suffocation caused by coal-gas and the tightness and want of ventilation of their bedroom.'"

DR. LEE ON THE STRUCTURE AND TREATMENT OF UTERINE POLYPI.—SIR,—I shall feel indebted if you will insert in your Journal the following statement made by me in a paper on "Uterine Polypi," published in the forty-fourth volume of the Medico-Chirurgical *Transactions*:—

"The histories of forty cases of polypus of the uterus are contained in my 'Clinical Reports of Ovarian and Uterine Diseases,' published in 1853. Respecting the results of the treatment adopted in these cases, a recent writer has made the following statement:—

"'That out of twenty cases of removal of fibrous polypus by ligature, recorded by a most strenuous defender of that operation—Dr. R. Lee—nine, or more than one in three, had a fatal result—a mortality more than double that of the operation of lithotomy, as high as that which occurs in placenta prævia, and higher than the mortality from malignant cholera.'"*

The truthfulness of this statement will be speedily judged by those who will take the pains to read this communication attentively.

"I have now the honor of presenting to the Royal Medical and Chirurgical Society a history of 105 cases of uterine polypi, reduced into a tabular form, in which the date, name, age, and social condition of the patients are recorded, and the symptoms and treatment and result are given. All the cases of polypus of the uterus which have ever come under my observation, fortunate and unfortunate, are contained in this table. In three of these 105 cases no operation was performed, and the result was not known. In two of the remaining 100 cases the polypi disappeared spontaneously by some process, the nature of which was not ascertained. One of these (No. 94) occurred in St. George's Hospital, and the polypus was not only felt protruding through the os uteri, but seen.

"Of the ninety-eight cases which remained, five died before any attempt had been made to remove the polypi by ligature or by any other means. The first of these (No. 2) occurred in the Middlesex Hospital, and the nature of the disease was not ascertained until the body was examined after death. In the second (No. 4) the patient died in the Fever Hospital, without any operation having been performed. In the third (No. 5) the patient died under the care of Dr. Sims in the St. Marylebone Infirmary from uterine hæmorrhage and the usual symptoms of cancerous disease of the uterus. In the fifth (No. 85) I had resolved to apply a ligature around the root of the polypus; but the patient, who was under the care of Mr. Barnes, of King's-road, Chelsea, died before the operation was attempted. A preparation of the uterus, with the fibrous polypus adhering to the fundus, is now placed upon the table of the Society, with two correct drawings by Mr. Arthur Roberts, the present Obstetric Assistant of St. George's Hospital.

"After deducting these ten cases there remain ninety-three, of which eight died and eighty-five recovered.

"By referring to the condensed history, it will be seen that in the first of these fatal cases (No. 7) the patient in the St. Marylebone Infirmary was moribund, when Mr. Perry, with the sanction of Dr. Sims, applied the ligature around the root of the polypus, which hung externally, and that she died the same evening. The preparation, with a drawing which has been figured in the Medico-Chirurgical *Transactions*, is now placed upon the table of the Society. I did not see the patient during life, and was not present at the *post-mortem* examination; but, nevertheless, this case is the first which has been adduced by the writer above referred to, to support the conclusion 'that out of twenty cases of removal of fibrous polypus by ligature recorded by me, nine, or more than one in every three, died.' The polypus is still seen hanging from the uterus, and has been laid open to show its structure, and has not yet been removed, and there is no visible mark on the root of the polypus, of the ligature ever having been applied.

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* "Lectures on the Diseases of Women," by Charles West, M.D., &c., 1856, p. 324.

"In the next fatal case the ligature was applied around the root of a large sloughing polypus which was hanging externally.

"In Case 11 Mr. Cæsar Hawkins endeavored to bring down the tumer, which had only passed through the os uteri partially, with a pair of forceps into the vagina; but not succeeding in the attempt, operated, and the polypus was removed by the ligature. Death took place in this case from peritonitis.

"In Case 16 the patient was under the care of Mr. Tatum, in St. George's Hospital, and she died of peritonitis before the root of the polypus had been divided by the ligature. The preparation is now placed upon the table of the Society. I did not see the patient during life; but this is another of the cases which have been adduced to prove that the mortality in my cases (recorded) of uterine polypi 'have been double that of lithotomy, as high as that which occurs in placenta prævia, and higher than the mortality from malignant cholera.'

"By an examination of this condensed history of 103 cases (105) of uterine polypi, it will be seen that of the last fifty cases which have come under my own care, and in which the operation has been performed by me, not one patient has died."

In a work, entitled "Clinical Memoirs on Diseases of Women," published in 1863, by Dr. Alfred H. M'Clintock, there is the following statement at page 183:—

"Now let us investigate a little further the results of *deligation.* Above are three deaths following ten operations, and these were the only fatalities among the thirty-four cases of polypus reported in the present memoir. A very high rate of mortality followed the use of the ligature in the cases reported by Dr. R. Lee, for of fifty-nine instances where the ligature was employed, nine of the women died, and two of these deaths occurred before the removal of the tumor was effected. Thus, then, out of sixty-nine cases of deligation were found twelve deaths, or one in five. Dr. Lee gives thirty-five other cases where polypi were removed by torsion or excision, and among these there is no death."

I hope that it will not be necessary for me again to correct these misrepresentations. I am, &c. ROBERT LEE.

Medical Times and Gazette.

STIMULANTS.—An article which appears in the *Popular Science Review* for October sums up in brief certain views of the nature of the therapeutic influence exercised by agents of the class called "stimulants," to which we have already alluded, and which seem worthy of professional attention. The author, Dr. Anstie, notices the capital fact (which seems strongly to point out the necessity of a great reform in our classification) that those actions of brandy, or of strychnia, for instance, which receive the name of "stimulant" *par excellence*, are in reality all of them the result of excessive and positively poisonous doses. He maintains that, unless we are to be involved in constant confusion and self-contradiction, the use of the word stimulant must be limited to physiological agents which simply restore vital motions to their normal level without inflicting *any* damage on the organism: and, on the other hand, that such effects as excessive rapidity of circulation, convulsive action of muscles, fierce or garrulous delirium, and so on, so far from being justly attributable to stimulation, imply an influence precisely the reverse of the latter. The same agents, according to the dose in which they are applied, are either beneficial stimulants, closely approximating to true foods in their therapeutic actions, or simple, unmitigated poisons, producing, as the case may be, narcosis, or acute inflammatory irritation, or excessive secretory discharge, &c.: all these processes are but different expressions of the fact that a part of the organism *has been killed.* For partial death of the organism may for practical purposes be said to occur whenever the exact balance of force and material which constitutes our only realisable notion of life is interrupted in any way. As Dr. Chambers has acutely remarked, the function, for example, of the mucous membrane, is *not* to secrete mucus, except in minute quantity; and it is, therefore, incorrect to speak of mucous catarrh as an instance of exalted or stimulated function: it is, on the contrary, a departure from vital conditions. Surely, in the presence of considerations like these, we shall cease to hear physiologists using such barbarously unmeaning words as "hyper-stimulation," and the like. The science of words is of too much consequence to be utterly neglected in the application of terms which, like the word "stimulant," represent ideas which form the very central point of all symptoms both of physiology and of therapeutics, while their different applications include the whole range of vital and of morbid causes. "Stimulants" lie so frequently at the base of modern medical treatment; the things which are said to stimulate, and this particular word "stimulation," enter so largely into modern medical practice and writing, that we should like to see some more general agreement as to the point of view from which the action of "stimulants" and "narcotics" can be regarded. Dr. Ansie has boldly shattered some favorite idols of the cave; let their worshippers look to their gods.—*London Lancet.*

Report of the City Physician.—The Annual Report of Dr. William Read, City Physician, states that the number of persons vaccinated in his office since the last quarterly return, was 195, and the number of children furnished with certificates of vaccination for admission into the public schools, is 80. Fifty-six physicians residing in the city have been furnished with vaccine matter. Early in the season it was found that smallpox had been introduced in the jail, and several of the inmates became sick, but by the removal of all exhibiting any symptoms, and a thorough vaccination of all the inmates, it was prevented from spreading. Hospital accommodations for both male and female prisoners will be provided as soon as contemplated changes are made. During the year there was one birth in the jail.

The health of the inmates of the Temporary Home at No. 36 Charles street has been unusually good. The sick have received attention, and a thorough vaccination has been observed. There have been eight births and eighteen deaths at the Home during the year, the deaths being those of infants abandoned in the streets. Forty-one men appointed on the police have been examined and certificates of their physical ability issued. Nearly one hundred disabled soldiers have been furnished with certificates of their condition to enable them to draw State aid. With the advice and consent of the Mayor, the Police were instructed in October last to canvass the city and report how many citizens were vaccinated. From the returns it appeared that 3372 persons were unprotected from smallpox. It is proposed to continue this sanitary measure. The attention of the city authorities is called to the existing law in regard to the smallpox and infectious diseases, and necessary and important amendments suggested. During the year, thirty-four patients have been treated at the pest house at the South End, and but one death occurred.

The business of the office for 1864 has been as follows:—persons vaccinated, 2504; re-vaccinated, 729; children examined and certificates given them for admission into the public schools, 596; physicians supplied with vaccine material, 199; number of visits made to persons in jail, 695; at the tombs, 19; at the Temporary Home, 60; number of cases of smallpox examined, 39; soldiers examined and certificates of disability given under the direction of the relief committee, 93; examination of persons appointed to the Police, 31; examinations of persons dying with no physician in attendance, and certificates, granted at the request of the City Registrar, 17; number of deaths from smallpox during the year, 113. The report was laid upon the table and ordered to be printed.

The following petition has been addressed by Dr. Hammond to the Senate of the United States. We hope it may have a respectful consideration:

To the Honorable the Senate of the United States:

"The undersigned, a resident of the City of New York, and late Surgeon-General of the Army of the United States, respectfully represents—

"That he has been deprived of his commission of Surgeon-General, and prohibited from again holding office under the Government of the United States by the sentence of a General Court Martial, under circumstances which he prays your Honorable Body to inquire into before confirming the appointment of his successor.

"He respectfully requests that your Honorable Body will cause to to be printed and will examine the record of the Court Martial, and hear such additional evidence, he was, by the neglect of the Judge Advocate to summon his principal witness, and by other circumstances, unable to lay before the Court, but which it is now in his power to adduce.

"He affirms, in all sincerity, that he believes the finding and sentence of the Court to be illegal, and not warranted by the facts of the case; that they were procured by conspiracy and false testimony, and that consequently his removal from office, and the disability placed upon him, are unjust and wrongful.

"By the failure to prosecute the civil suit instituted against him by order of the Secretary of War, and the fact that there is no appeal from the decision of a Court Martial to a higher Court, your petitioner is debarred all opportunity of vindicating his unjustly aspersed character, but such as your Honorable Body may see fit to afford him.

"For these reasons, he prays your Honorable Body to inquire into all the circumstances connected with his recent trial and dismissal, and to suspend action in the matter of confirming the appointment of his successor, till such inquiry is made, with the view that, should it appear that your petitioner has suffered injustice, he may be, by act of Congress, restored to the position from which he has been displaced.

"And your petitioner, as in duty bound, will ever pray, etc.

WILLIAM A. HAMMOND, M.D.

"New York, Dec. 25, 1864."

STATUES TO LAENNEC AND DUPUYTREN.—The Medical Profession in France seems nearly as backward as ourselves in commemorating its celebrities. It was only the other day that a statue was erected to Larrey, and the Medical Association has just determined to organize a subscription for a similar tribute to the memory of Laennec. This again has called to mind the fact that no memorial exists of Dupuytren, notwithstanding his generous legacy of 200,000 francs for the foundation of the Museum which bears his name, and a chair of pathological anatomy.—*Med. Times and Gaz.*

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JANUARY 21st, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	43	45	88
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.1	40.5	81.6
Average corrected to increased population - - - -	00	00	89.23
Death of persons above 90 - - - - - - -	0	0	0

COMMUNICATIONS RECEIVED.—Essay on Gun-shot Wounds, for the Fiske Fund Prize, 1864.—Does Man derive the Trichinæ from the flesh of the Hog alone? Is Pork an unhealthy Article of Food?

MARRIED,—At Foxboro', Mass., Jan. 25th, Isaac Smith, Jr., M.D., late Assist. Surg. 26th Mass. Vols., to Miss Annie L. Carpenter, both of F.—In this city, 17th inst., Dr. Elisha M. White, Surgeon of the 37th Regiment, to Miss Amelia Hopkins.

DIED,—At South Lynnfield, 17th inst., Thomas Keenan, M.D., aged 61 years.—At Gorham, Me., Dr. John Waterman, aged 76.—At Chattanooga, Jan. 18th, Dr. R. M. Smith Jackson, U.S. Vols., of Crescent, Pa.

DEATHS IN BOSTON for the week ending Saturday noon, Jan. 21st, 88. Males, 43—Females, 45.—Accident, 1—apoplexy, 2—disease of the bowels, 2—congestion of the brain, 2—disease of the brain, 5—bronchitis, 2—cancer, 1—consumption, 22—convulsions, 3—croup, 2—debility, 1—diarrhœa, 1—diphtheria, 2—dropsy, 1—dropsy of the brain, 1—scarlet fever, 1—typhoid fever, 2—hæmatemesis, 1—disease of the heart, 3—infantile disease, 6—intemperance, 1—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 5—marasmus, 2—old age, 1—paralysis, 2—puerperal disease, 3—smallpox, 6—unknown, 3—retention of urine, 3—whooping cough, 1.

Under 5 years of age, 29—between 5 and 20 years, 5—between 20 and 40 years, 30—between 40 and 60 years, 19—above 60 years, 5. Born in the United States, 53—Ireland, 24—other places, 11.

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